

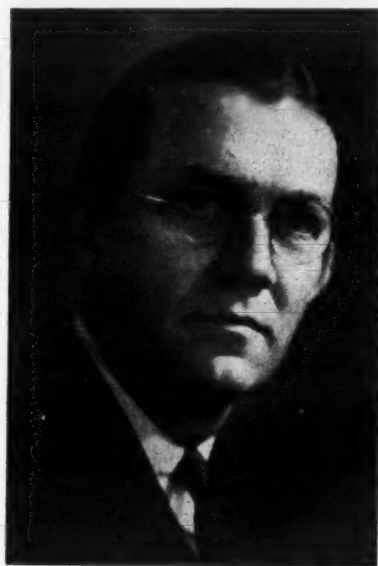
Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trade Mark Registered U. S. Patent Office. Copyright, 1945, by Business News Publishing Co.

In his new post he will be responsible for all Baker sales activities which are conducted through a nation-wide distributor organization with branch offices in Los Angeles and Seattle, Wash. Foreign distributors are established in 63 countries.

The Governor Looks Over the Admiral Heads Iceberg Sales



Ross D. Siragusa, left, president of Admiral Corp., Chicago, points out to Indiana's governor, Ralph Gates, right, features of his company's new refrigerator, production of which has commenced at the Connersville, Ind., plant of the American Central Mfg. Corp. Admiral's first unit was presented to an Indiana state school.



SAM C. MITCHELL
Former western sales manager for Crosley, he now manages sales for Iceberg Refrigerated Locker Systems, Inc.

Kelvinator Corp. Buys English Subsidiary

DETROIT—Nash-Kelvinator Corp. has purchased Kelvinator, Ltd., English subsidiary of Kelvinator of Canada, Ltd., it was announced by H. A. Lewis, vice president.

The purchase, for \$615,000, has the twofold purpose, Mr. Lewis said, of sharply strengthening the net working capital position of the Canadian company, while at the same time providing for expansion of the British company as a self-contained manufacturing and distributing unit.

South Bend Branch Opened by M-H

SOUTH BEND, Ind.—Opening of a new office of the Minneapolis-Honeywell Regulator Co. here, is announced by Fred Kaiser, regional manager here.

The new office will be staffed by Richard Stewart, acting as district representative for Honeywell controls, and George Gilliam, who will supervise industrial instrument operations in that area. Located at 224 W. Jefferson St., it will serve as a sub-office under the Indianapolis branch.

Timm Industries to Make Cleaners, Vending Units

LOS ANGELES — Formation of Timm Industries, Inc. for production of the new Timm vacuum cleaner and to fill a \$1,000,000 order for Coca Cola vending machines, is announced by Timm Aircraft Co.

Roy B. Buckley, executive vice president of Timm Aircraft, will head Timm Industries as president and general manager.

WPB Drops Inventory Restrictions on 10 Major Appliances

WASHINGTON, D. C.—Ten major household appliances have been exempted from inventory restrictions of the War Production Board, to enable producers, wholesalers, and retailers better to distribute consumers' goods which are scarce because they were not manufactured during the war years, WPB announced.

The action was taken by issuing Amendment 1 to Order L-63 and Direction 1 to Order L-219. Items included as exemptions in suppliers' inventories of supplies covered by Order L-63 and also in mercantile inventories of consumers' goods, as defined in Order L-219, are: mechanical refrigerators (L-63 had previously excluded this item from suppliers' inventory computations), gas and electric ranges, washing machines, electric mangles, electric water heaters, vacuum sweepers, sewing machines, radio receiving sets, phonographs, and radio-phonograph combinations.

The high unit cost of the appliances is also a factor which contributed to the difficulties encountered by distributors and retailers, WPB said. Many merchants, whose total inventories are close to the overall dollar limits imposed by Orders L-63 and L-219, have expressed concern over their ability to avail themselves of increased manufacturers' allotments, even though such allotments are expected to remain relatively small until next year. Other merchants, dealing principally in major appliances, hesitated to make definite commitments to their suppliers, thus upsetting allotment schedules of manufacturers and impeding equitable distribution of their product.

Dunning Heads New G-E Sales District in N.Y.

BRIDGEPORT, Conn. — Appointments of Clayton P. Dunning as manager of the newly-organized New York appliance sales district of General Electric Co. and of Carleton A. Reeves as manager of the northeastern appliance sales district, Boston, have been announced by C. R. Pritchard, general sales manager of G-E's appliance and merchandising department.

After attending Alabama Polytechnic Institute, Mr. Dunning became associated in 1925 with the Matthews Electric Supply Co., a G-E distributor in Birmingham, Ala. Ten years later he transferred to the General Electric Supply Corp. in Atlanta and in 1942 went to Washington as liaison between WPB and G-E.

A native of Southampton, L. I., Mr. Reeves succeeds Lieut. Col. James A. Ramsey, who died Sept. 24. He was a student at St. Lawrence University before joining G-E's Edison Lamp Works at Harrison, N. J., in 1924. Later he went to Denver and then to New York as a lamp specialist.

Mr. Reeves became associated with Rex Cole, a G-E distributor, in 1936 and was appointed the company's range and water heater representative in Boston a year later. During the war, he was with WPB in Washington and Boston and since the first of the year has been acting manager of the northeastern district.

Standard Cooler Plans Commercial Line

RICHMOND, Va.—Standard Cooler Corp. is the name of a commercial refrigeration manufacturing concern founded by T. H. Morris & Sons here. The firm will produce cabinets, coolers, and drink boxes, it was announced.

Resumes Times Post



COL. ARTHUR F. CALLAHAN

Callahan Returns To Times Appliance

NEW YORK CITY—Col. Arthur F. Callahan rejoined Times Appliance Co., Inc., Westinghouse distributor here, as vice president in charge of the appliance and radio division. It was announced.

Early in 1942, he left the firm to enter the Ferrying Command of the Army Air Forces, which later became the Air Transport Command. Col. Callahan helped in the layout of air bases and air routes all over the world.

Before his appointment to the position of assistant Chief of Staff of the North Atlantic Division of the Air Transport Command, he was Chief of the Engineering Division in Washington.

Col. Callahan was managing director of the Electrical Refrigeration Association of New York and also managing director of the Air Conditioning Association during the 1930's. He is a member of the American Society of Civil Engineers.

American Central Prices Set at Oct., 1941 Level

CONNERSVILLE, Ind. — All-steel kitchen sinks and cabinets manufactured by American Central Mfg. Corp. here will be on sale at October, 1941, prices, it was announced by C. Fred Hastings, general sales manager.

"Our costs, like those of other manufacturers, have increased substantially since last production of kitchen sinks and cabinets. It is the desire of our management, however, in view of the present pricing policy, to absorb the increased costs, as long as we possibly can," stated Mr. Hastings in a special bulletin dispatched to American Central's coast-to-coast distributor organization.

He added that the concern has practically completed the necessary reconversion of its plant facilities and should be in production on household equipment very shortly.

Jacobs Will Assemble Washers in Indianapolis

INDIANAPOLIS—F. L. Jacobs Co. has acquired a plant here where it will assemble its Laundrell automatic washing machine and another product yet to be disclosed, Rex C. Jacobs, president, announces. The plant was purchased from International Detrola Corp., which transferred production and servicing of its Libbey turret lathes to its Elkhart, Ind. plant.

It previously was planned to assemble the washing machine at the F. L. Jacobs plant in Dowagiac, Mich., but this has since been sold, Mr. Jacobs states.

Improved PACKLESS VALVES

"Simplicity" Packless Valves

- ... have round hand wheels for easy hand grip
- ... have flat steel springs for positive spring action
- ... have raised body seat that controls travel of stem
- ... have uniformly level connections for ease in installation
- ... have unusually low overall height, reducing required installation space
- ... have multiple diaphragms, a construction outlasting any other possible combination

Free

Write today or phone any branch office for our new, fully illustrated Refrigeration catalog.

Look Ahead with

Weatherhead

THE WEATHERHEAD COMPANY, CLEVELAND 8, OHIO
Plants: Cleveland, Columbia City, Ind., Los Angeles,
Canada—St. Thomas, Ontario

This Weatherhead product is an outstanding example of the engineering "know-how" with which we have endowed all our refrigeration parts. The "Simplicity" Packless Valve was designed-in-use to insure economical long life and trouble-free operation. This product is available in a wide variety of sizes, both flared and solder types.

BRANCH OFFICES: NEW YORK • PHILADELPHIA • DETROIT • CHICAGO • ST. LOUIS • LOS ANGELES



The Watchdog of the Nation's Food Supply



Refrigeration Products

Humi-Temp Forced Convection Units—Patented CROSS-FIN COILS—Bare Tube Coils—Zinc Plated Steel Plate Coils—Disseminator Fans—Heat Exchangers—Evaporative Condensers—Instantaneous Water Coolers—

See Your Jobber or Write Direct to

LARKIN COILS

519 Memorial Drive, S.E., Atlanta, Ga.

WHAT WILL YOU OFFER YOUR SALESMEN?

SELLING JOBS...OR A VOCATION IN SALES?



These are the alternatives that every dealer must recognize as he plans and builds his sales organization today . . .

He can give a man just another selling job . . . or he can bring to *all* his men—to *himself*—the opportunity of building a real *vocation in sales*. He can throw together a flash organization or he can create a solid *business*—a substantial, long-range institution that will serve his community—and *him*—through many mutually profitable years.

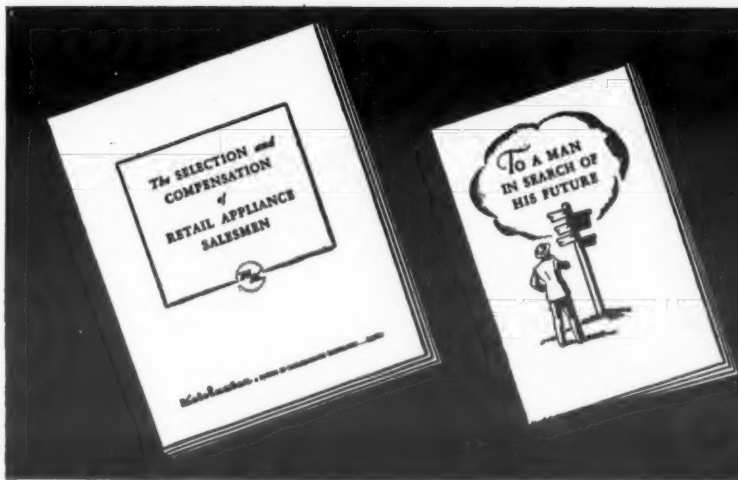
It is the purpose of Kelvinator's Retail-Minded Program to build both for now *and* the future . . . to assist the retailer who wants the security, the respect, the faith and good will that come to him who builds on firm foundations. This is Kelvinator's program, evidenced not only in its Selective Distribution Pattern, its Product and Pricing Policies, its Point-of-Sale Merchandising—but in the help, too, that Kelvinator extends to retailers through the most advanced and effective training and business development program ever to come from the appliance industry: Kelvinator's great *Vocation-in-Sales* Program!

Initiated in September, 1944, *Vocation-in-Sales* grew out of Kelvinator's Retail Sales Management Forum, in which Kelvinator sales executives, together with retail sales executives from department, chain, furniture and appliance stores, explored the whole field of retail selling. In its final form—as checked, supplemented and fortified by the technical research of leading vocational authorities—Kelvinator's V.I.S. Program provides retailers with a scientific method for attracting, selecting and developing men who are qualified to succeed as salesmen, whether or not they have had previous experience.

Illustrated on this page are two of the booklets developed as a part of the V.I.S. program's first two phases: *attracting* and *selecting* salesmen. Following these, Kelvinator will bring to the retailer—as just another part of his Kelvinator Franchise—basic instruction for his salesmen, both in selling techniques and product training, in schools conducted by Kelvinator; a planned program for periodic introduction of new and refreshing selling tactics, brought to the store by Kelvinator Zone and Distributor District Managers; and a planned series of materials and methods for retailer's use in conducting his own sales training meetings.

This is Kelvinator's answer to the question: Selling jobs . . . or a *vocation in sales*?

*The most Valuable Franchise
in the Appliance Industry*



Covering the two opening phases of Kelvinator's great "Vocation-in-Sales" Training Program, these two booklets will help Kelvinator Retailers to attract and select the right salesmen.

LOOK AHEAD WITH

RETAIL-MINDED

Kelvinator

DIVISION OF NASH-KELVINATOR CORPORATION
Kenosha • Milwaukee • DETROIT • Grand Rapids • Lansing



N-K MUSICAL SHOWROOM
Nash-Kelvinator's new hit musical show, with the Andrews Sisters, Curt Massey and Guest Stars—every Wednesday evening at 10:30 P. M., E. S. T.—Columbia Broadcasting System.



Kelvinator Line--

(Concluded from Page 1, Column 5)
necessary for this new refrigerator.

The new Kelvinator "Moist Master" which tops the 1946 line, has special provisions for freezing and storing frozen foods, for the safe-keeping of foods of high moisture content, and for general storage of all average foods, the company says. The new unit has a freezer capacity of approximately 9 pounds of ice cubes, and more than 35 pounds of packaged frozen foods. Its net capacity is 9 cu. ft.

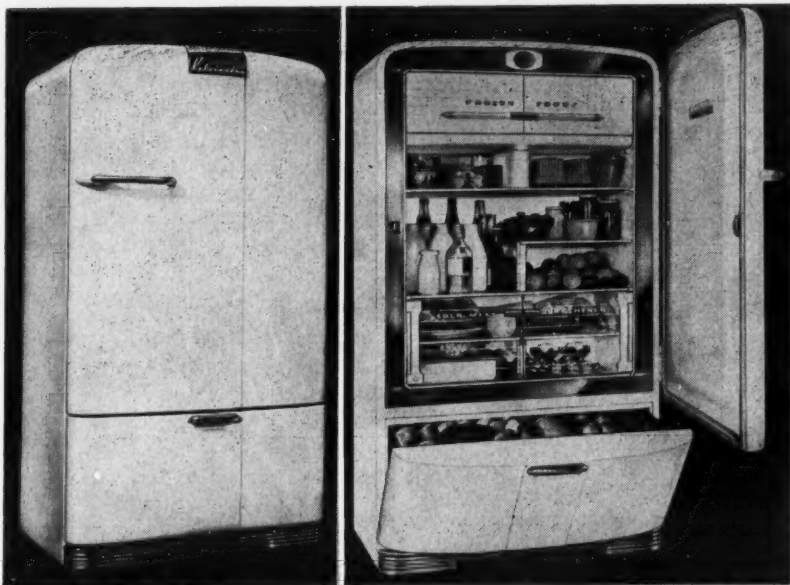
For the protection of high moisture foods, the "Cold Mist Freshener" feature of the new unit employs a separate set of cooling coils concealed in the walls of the cabinet surrounding the freshener. These coils, together with glass shelves which reduce moisture absorbing air circulation, maintain a still supermoist condition in the compartment, it was said.

Lead-off model of the 1946 series is the CS-7, the lowest-priced of the group. Incorporating all of the basic Kelvinator engineering and construction features, the 7-cu. ft. unit has 12.2 sq. ft. of shelf area, with a freezer compartment capacity of 9 pounds of ice cubes, and 20 pounds of packaged frozen foods.

The next step upward in the line is to the C-7, a 7-cu. ft. model with four additional features: the roomy vegetable "Crisper," a sliding meat chest, with a capacity of up to 12 pounds, the five-way "Magic Shelf," and a 1 1/4 bushel vegetable bin.

Next in the line is a third 7-ft. model, the CD-7, which has

Kelvinator's Top Model for 1946



Top model in Kelvinator's 1946 refrigerator line is the MM9, a 9 cu. ft. "Moist-Master" unit, which is shown above. Besides a freezer capacity of 35 pounds of frozen foods and nine pounds of ice cubes, this model has a special compartment for the protection of high-moisture foods.

double "Crispers" with clear glass covers, 13.1 sq. ft. of shelf area, and a freezer capacity of 9 pounds of ice cubes and over 30 pounds of packaged frozen foods.

All the Kelvinators have the "Polarispher" hermetically sealed unit which operates under a steel dome, in a life-time bath of oil, without fans, belts, or pulleys. The unit normally operates only 12 minutes in every hour, providing unusual economy and more than ample reserve power, said Mr. Law-

son, who added that factory service records show that fewer than .5% of these units have been returned to the factory for service.

Mr. Lawson said that numerous changes in production methods, designed with the three-fold purpose of getting shipments speedily to dealers, accelerating production to peak levels, and greatly increasing plant capacity have already been effected. Among these changes was the removal of all final assembly operations on refrigerators to Grand Rapids.

OPA Prices--

(Concluded from Page 1, Column 4)

lect a charge for the extension of credit only on instalment plan sales, and the charge shall not exceed the separately stated additional charge for the extension of credit on a similar sale on similar terms to the same class of purchaser during the period Oct. 1-15, 1941, by the dealer's closest competitor who made a separately stated charge.

Also worth reading closely is Section 22 (d) of Article IV:

"(d) Certain Practices forbidden. Any practice which has the effect of getting a higher-than-ceiling price without actually raising the dollar and cents price is hereby forbidden.

"The following is an illustrative list of the things a seller is not permitted to do. A seller is not permitted to require the purchaser, as a condition of the sale or transfer of the new refrigerator, to make payment over a period of time; to require him to finance the purchase through any particular lending agency, to

require him to purchase any equipment, accessories, parts, or services so as to increase the total compensation above the new refrigerator maximum price; to require him to purchase any other commodity or service; or to require him to make payment in whole or in part by exchanging, transferring, or trading in any other product or commodity.

"Where there is an exchange, transfer, or trade-in, in connection with a sale, it is a violation for the seller to give the purchaser an allowance for the product or commodity exchanged, transferred, or traded-in which is less than its reasonable value."

This last paragraph, which would naturally relate to trade-ins of used refrigerators, is meaningless without a definition of the term "reasonable value."

Some are wondering if "reasonable value" could be expressed as a percentage of the ceiling prices on used refrigerators given in Maximum Price Regulation 139.

The following table gives a quick picture of how the pricing situation currently holds on major appliances:

Product	Manufacturers' Price	Dealers' Margin	Retail Prices
Refrigerators	Generally same as those for comparable models sold during war	Reduced about 2% because of rollback in retail price	Somewhat lower
Ranges	No change	No change	No change
Washers	Increase factor of 7.7% granted producers	Dealer absorbs about 80% of increase granted producer	No increase

Refrigerator Prices as Established by OPA

The following table of refrigerator retail prices as established by MPR 598 is republished for the convenience of readers:

Make	Brand	1946 Model No.	1st Zone	2nd Zone	3rd Zone	4th Zone	5th Zone
Admiral Corp.	Admiral	CS-746	\$187.95	\$192.95	\$197.95		
		CS-946	217.95	222.95	227.95		
Borg-Warner Corp.	Norge	M-746	193.95	196.95	198.95	200.95	202.95
Copeland Refrigeration Corp.	Copeland	Prices and Models to Be Announced					
The Crosley Corp.	Crosley	SS-746	148.50	150.50	153.50	165.50	
Edison General Electric Appliance Co., Inc.	Hotpoint	EA6-46	135.75				
		EA7-46	151.50				
		EB7-46	188.25				
General Electric Co.	General Electric	LB6-46	133.75				
		LB7-46	151.50				
		JB7-46	188.25				
The General Motors Corp.	Frigidaire	S17	146.75	148.25			
		M17	161.75	163.25			
		MP17	184.75	186.75			
		D17	178.50	180.75			
		DP17	202.00	204.50			
		D19	224.75	227.50			
		DP19	247.50	250.50			
		CD17	248.25	251.75			
		CPD17	271.50	275.25			
		CD19	283.25	287.25			
		CPD19	306.60	310.75			
		CPDI13	482.00	489.25			
		AH14	137.00	138.23			
		AH16	140.75	142.00			
Gibson Electric Refrigerator Corp.	Gibson	F666	172.25	175.25	178.25	181.25	184.25
		F686	196.50	199.50	202.50	205.50	208.50
		F786	215.95	218.95	221.95	224.95	227.95
		SF796	255.50	258.50	261.50	264.50	267.50
Montgomery Ward & Co.	Montgomery Ward	Prices and Models to Be Announced					
Nash-Kelvinator Corp.	Kelvinator	CS-7	146.95				
		C-7	171.95				
		CD-7	185.95				
		H-9	253.95				
Nash-Kelvinator Corp.	Leonard	SL-7	146.95				
		L-7	171.95				
		DL-7	185.95				
		LH-9	253.95				
The Philco Corp.	Philco	Prices and Models to Be Announced					
Sears, Roebuck & Co.	Coldspot	45126	125.95	130.95	135.95		
		45236	164.95	169.95	174.95		
		45326	174.95	179.95	183.95		
		45238	185.95	188.95	193.95		
		45428	195.95	198.95	203.95		
		41338	203.95	206.95	213.95		
		41228	183.95	188.95	193.95		
		45126	115.95	120.95	125.95		
		45236	154.95	159.95	164.95		
		45326	164.95	169.95	173.95		
		45238	173.95	178.95	183.95		
		45428	183.95	188.95	193.95		
		41336	193.95	198.95	203.95		
		41228	173.95	178.95	183.95		
Servel Corp.	Electrolux	R-400	149.95	153.45	155.95	156.45	
		R-600A	192.95	196.45	198.95	199.45	
		R-600	274.95	278.45	280.95	281.45	
		R-800A	269.95	273.45	275.95	276.45	
		R-800	324.95	328.45	330.95	331.45	
		N-603	284.95	287.95	290.45	291.95	
		N-803	334.95	337.95	340.45	341.95	
Westinghouse Electric Corp.	Westinghouse	Prices and Models to Be Announced					

- 1 Zone 1 includes 48 states and Washington, D. C.
- 2 Territories served by independent distributors.
- 3 Territories served by factory branches.
- 4 Midwest Zone.
- 5 East-Southeast Zone.
- 6 West-Southwest Zone.

YOU'LL FIND THE

Service You've Been Looking For

UNIVERSAL COOLER'S
Advanced HERMETIC
REFRIGERATING UNITS

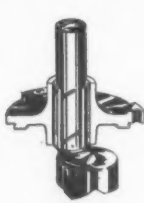
● Economical, dependable service—that's what you want for your refrigerated cabinet! And that's exactly the kind of service that Universal Cooler "Case-Welded" Hermetic Refrigerating Units will provide. Careful attention to details of advanced design and construction is one reason why these outstanding hermetics are creating new performance standards in the refrigeration industry.

Take one exclusive Universal Cooler feature as an example: Rotating parts are dynamically balanced—designed, built and tested to limits that are as near perfection as can be achieved by the most modern production methods. This "balance" holds vibration and noise to negligible minimum . . . insures equal distribution of bearing load over entire length of all bearings (means longer bearing life) . . . assures ideal alignment and action of piston in cylinder as well as accurate relationship of other reciprocating parts at all times.

If you are a manufacturer, now is the time to get complete information . . . write today for data on ALL the features that contribute to the outstanding service record of these advanced hermetics! Learn why leading refrigeration manufacturers say:

"Let's Buy Universal Cooler"

Additional
features of
UNIVERSAL
COOLER
Refrigeration
Units



MAIN BEARING
EXTRAS



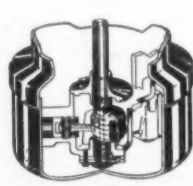
THERMOSTATIC
OVERLOAD CONTROL



INTEGRAL
SILENCER



PHOSPHOR BRONZE
CONNECTING ROD BEARINGS



POSITIVE
LUBRICATION

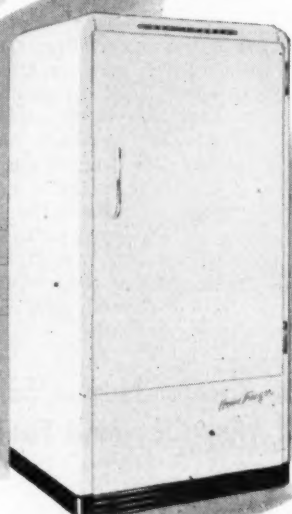
UNIVERSAL COOLER

DIVISION INTERNATIONAL DETROLA CORPORATION

MARION, OHIO • BRANTFORD, ONTARIO

FOR DEALERS WHO WANT TO CASH IN ON THE BIGGEST MARKET IN THE HISTORY OF THE INDUSTRY

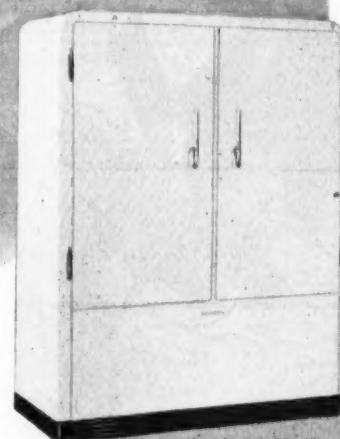
Packaged Refrigeration
by **Westinghouse**



HOME FREEZERS



ROOM AIR CONDITIONERS



REACH-IN REFRIGERATORS



DRY BEVERAGE COOLERS



DROP-IN MILK COOLER UNITS



MILK COOLERS



WATER COOLERS

A complete line of Commercial Refrigeration and Room Air Conditioning products with hermetic units, in sizes and models for all applications.

EASY TO APPLY—Complete factory-prepared application data, rating and performance tables provided to simplify the dealer's job.

EASY TO INSTALL—Complete *packaged* units ready to plug in—ordinarily no wiring or assembling required.

EASY TO SERVICE—Complete and detailed instructions specially developed for dealer servicing—hermetically-sealed construction simplifies replacement when necessary.

For details about the availability of these products, write to Westinghouse. We will have the distributor *in your territory* call directly on you and present complete franchise information.

WESTINGHOUSE ELECTRIC CORPORATION

Plants in 25 Cities - Offices Everywhere

Refrigeration Specialties Dept. Springfield, Mass.

One Answer To Problem of Priorities on 'Registered' Prospects For New Models

By Ross Potter

PLYMOUTH, Mich.—At least one system of delivering household appliances according to customer registration, worked out by a local dealer here, promises to function perfectly throughout the period of postwar appliance shortages.

Kimbrough Electric, owned and managed by Richard L. Kimbrough, is the authorized General Electric dealer for Plymouth and its surrounding area. Plymouth lies 20 miles west of Detroit.

The sales plan essentially is a follow through of G-E's "Appliance Survey Record" idea, in which large openface counter booklets were sent to all G-E dealers almost a year ago. In these registers customers could check, from a list of appliances on each page, the ones they were going to want after the war.

About two months ago, Mr. Kimbrough noticed that his list of names had gotten up around the 300 mark—a lot of people to keep waiting in-

definitely, it seemed to him, even though home appliances were still nowhere in sight.

He had chewed over the problem on a trip to Little Rock, Ark., early this year, and talked it over with a friend of his, Milton Gunn, an insurance broker there. Between them they had cooked up the plan Mr. Kimbrough now is following.

Drawing a few names from the ledger, he first sampled a little public opinion. Some of them, it turned out, merely wanted to be notified when the indicated appliances came in. But many of them considered their entries as definite orders, to be filled as listed.

Letter To the Registrants

And so, early in August, each of the people who had signed their names received a letter from Mr. Kimbrough. He had a plan for making reservations on the appliances they had checked, the letter explained, and he would like to talk it over with them. Would they drop in and see him?

As the signers came in, he went over the score with them: No exact price could be set until OPA came through with same. No exact arrival time could be promised, and even when appliances did start coming in there would be only a few of them for some months to come.

In light of these facts, he explained to them, he had set up a reservation

and purchase agreement to give those people who needed them most a priority on the first appliances coming in.

He showed them a copy of the agreement, covering essentially these points:

1. The firm will reserve and deliver this specific appliance, chosen by the customer from the pictures and description in the 1942 G-E catalog, as soon as possible. If another model comes in before this one, the customer will be notified and given a chance to buy that one instead.

2. The customer agrees to buy the appliance named, and receipt is acknowledged of the deposit he has made with this order, the rest of the purchase price to follow in cash or according to an instalment contract after delivery.

3. At the top of the agreement is typed the customer's assigned priority number and the specific appliance to which it applies.

Two Types of 'Priorities'

Under the plan, a separate agreement is made out for each appliance ordered.

The customer signs, and the contract is complete.

There is an exception to this procedure if the customer's need is not drastic and immediate. If this order is toward replacement of a still usable item, he is asked to wait for the second round, until the people who have been doing without get theirs.

People have been perfectly willing to do this, Mr. Kimbrough reports. Their priority standings are filed, in the order of their coming in, on separate 3 x 5 cards.

The amount of deposit is the same on all models of any one appliance, to simplify bookkeeping. Flatirons require a \$2 deposit, vacuum cleaners \$5, and all the rest \$10.

Those appliances most often spoken for under this part of the campaign have been the same on the original register as on the purchase agreements. Washers were first, refrigerators a close second, electric ranges third, and vacuum cleaners fourth in the register. In the purchase agreements, vacuums ran third and ranges fourth.

In the "miscellaneous" column, home freezers and radio-phonograph combinations led the rest. (Each register page specifically listed clothes washers, dishwashers, disposals, ironers, ranges, refrigerators, vacuum cleaners, washing machines, and water heaters. A ninth column, marked "miscellaneous," was left blank for the customers to write the names of other appliances wanted.)

They Get a Call

As the first appliances come in—and a few of the more simple ones already have begun to—the entire list of people who registered for any model of that appliance is called, in the order of their purchase agreements, and given information on exactly what the company has received.

If this is not the model they have indicated, Mr. Kimbrough says so immediately. But they do have a priority on the item, he tells them,

and have the right to buy this model if they want to.

Most of the time they don't, he reports. And he doesn't urge them to. But it does let them know that no matter how slowly items come in they have first choice on anything in that line, and that he hasn't forgotten them.

The story so far covers the company's more or less regular customers—those who registered in the store. Mr. Kimbrough, however, has taken it a little farther.

He had some postage-paid business reply cards printed, listing on their reverse side 19 household appliances under the heading "Please check your needs."

Getting More Prospects

These he sent out, four weeks after the letters to his regular customers to a regular mailing list of the town, including five rural routes and Route 2 of Garden City, a smaller community to the southeast.

As these cards come back, he follows each one up with a letter similar to those first mailed out to the people registered in his book. The people who come in answer are given priority sequence on a first come first serve basis, with those needing the appliances badly again grouped first.

The two lists of critical customers are combined, and called first when the appliances come in. The two lists of replacement customers also are combined, again in the order of their registration, and notified accordingly.

Results have been good, Mr. Kimbrough reports. He got a 50% return on the letters to those who registered in the store, and a 2% return on those who were mailed cards. That 2% is a proportionately good return, he adds.

Small appliances were asked for slightly more often by the card customers—items such as toasters, mixers, and the like. Beyond that their orders were consistent with those from the first campaign, he reports.

The whole idea is certainly not exclusive, Mr. Kimbrough confesses. He has seen variations of it in several places. But it was original with him and Mr. Gunn as far as figuring it out for themselves.

Kimbrough Electric has been the authorized G-E dealer for the Plymouth territory since 1939. Its owner has been in the electrical supplies business there since 1925. This campaign idea makes the second 20 years look even better.

His fellow conspirator isn't doing badly on the deal, either. He is now the authorized G-E dealer in Little Rock, Ark.

Gunter Named Sales Head For Cleveland Firm

CLEVELAND—Dean W. Gunter has been appointed sales and promotion manager of J. C. Boylan Co. here, according to announcement by Jerome C. Boylan, president.

Located at 224 Rose Bldg., the J. C. Boylan Co. distributes Stewart Warner radios in northern Ohio.

HARDERFreez HOME LOCKER

COMPARE HARDERFreez and see why experts say it will outsell any other unit of its kind! 12 cubic-foot capacity. Temperature control. 25% more insulation. OKAY Plate Coil. Modern design. Available this year.

TYLER FIXTURE CORPORATION
Dept. R-11 Miles, Michigan
Rush data on HARDERFreez.

Name _____
Address _____

WRITE TODAY!

Easily demonstrated advantages

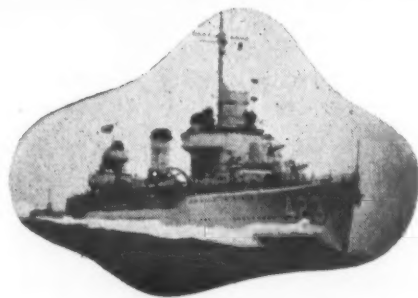
of FIBERGLAS insulation

RESILIENT
NON SETTLING



You'll find you have a potent selling feature—a real "sales-clincher"—when you can tell your customers *it's insulated with Fiberglas*®. For never before has any insulation been such a standout—first choice with manufacturers, distributors, retailers and consumers alike.

Fiberglas Thermal Insulation has demonstrated its worth in millions of homes—in ranges, refrigerators and other appliances built in the years before the war. Today, this fine material is better than ever—helping appliances do a better job, at lower costs, for a longer time. *What a selling story!*



DID YOU KNOW...

Fiberglas Thermal Insulation—the same material used in ranges and refrigerators—was pressed into boardlike form and used for hull insulation in all of Uncle Sam's Fighting Ships. Fiberglas stood up and stayed in place despite the pounding of the seas and the severe shock of gunfire.

FIBERGLAS THERMAL INSULATION

U. S. Pat. Off.



We have built, are building, and shall continue to build all types of custom-made coils for air conditioning and refrigeration equipment.

It will cost you nothing to ask us for a quotation on your requirements.

Swan Engineering Company, Inc.

18-58 Nelson Street
Bloomfield, N. J.

Detroit "DURA-FRAM" Automatic Expansion Valves

MADE IN A COMPLETE
RANGE OF CAPACITIES

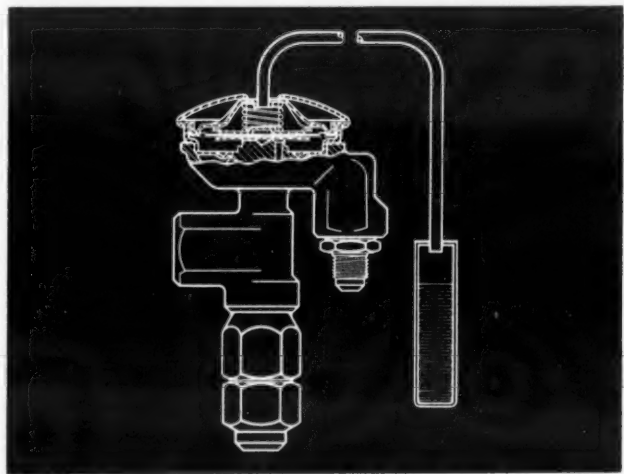
There is a Detroit "Dura-fram" Expansion Valve for any capacity from 1/2 ton to 20 tons Freon. Each does a better, smoother job—lasts longer—requires less attention. These valves are favorites of refrigeration men everywhere. Write for Catalog 200-A.

DRYING LIQUID CHARGED EXPANSION VALVES

No. 8 of a Series

Detailed here are the effective methods of drying "Detroit" Liquid Charged Expansion Valves No. 893L, 897L, 899L, 786L, 787L, and 788L.

When removing moisture from liquid charged valves extra precautions must be taken. A liquid charged valve has a large quantity of charging liquid in the power element. The feeler bulb will hold all the liquid in the power element assembly, and if the valve body is heated when the feeler



bulb is cool, the charge will condense in the feeler bulb, and no harm will be done.

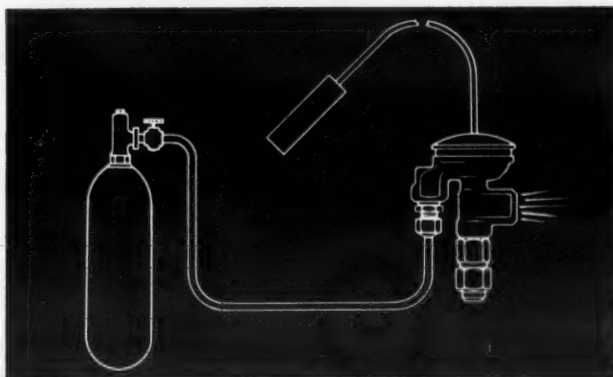
But the power element (top of valve) cannot hold all the liquid in the power element and bulb assembly. When the power element is cold, liquid condenses in it, but some liquid remains in the feeler bulb. Therefore, if the feeler bulb of a liquid charged valve is over-heated, or if the entire assembly is heated at once, excessive pressure will be generated which will damage the valve diaphragm.

WARNING. Never heat a liquid charged thermostatic expansion valve unless the feeler bulb can be kept cool. Never subject the feeler bulb to temperatures in excess of 120° F. under any circumstances.

Safe methods of dehydrating these valves are as follows:

1. METHYL ALCOHOL AND REFRIGERANT

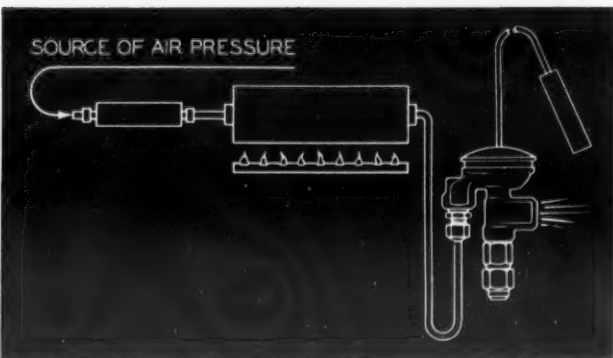
Hold valve with outlet pointing up and pour methyl alcohol into outlet connection until it runs out the inlet. Cap both connections with fingertips and shake well. Then drain alcohol from valve body. Repeat several times. Finally, connect valve to Freon or methyl chloride gas drum and blow out remaining alcohol.



2. HOT DRY AIR

This method may be used if the feeler bulb is kept at room temperature or lower. Required is a source of air under pressure, a dehydrating cartridge, and a tank for heating the air. Blow hot air through the valve for about 30 minutes, until the valve is thoroughly warm. Cap or install the valve immediately to prevent entry of moisture from the atmosphere.

Hot air temperature should not exceed 160° F, and air pressure should not exceed 50 p.s.i.



Complete description of a typical set up for this type of drying will be found in sheet No. 4 of this series.

3. ATMOSPHERIC OVEN

DO NOT DRY LIQUID CHARGED VALVES BY THIS METHOD.

4. HEAT AND VACUUM

DO NOT DRY LIQUID CHARGED VALVES BY THIS METHOD.

No. 899 New "Dura-fram"

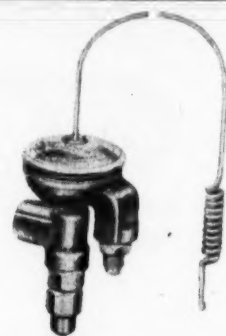
Expansion Valve



Capacity: 1.5 to 6 tons Freon, 3 to 11 tons methyl. Has external equalizer and forged union connections. Inlet and Outlet 1/2", 3/4" and 1" O.D. tubing. Flared not for 1/2" tubing on equalizer.

No. 893 "Dura-fram"

Expansion Valve



Adjustable type. Capacity: 1/2 ton Freon, .9 ton methyl. Inlet 1/2" or 3/4" SAE. Outlet 1/2" female IPT or 3/4" SAE. Has strainer at inlet.

No. 787 "Dura-fram"

Expansion Valve



Representative of large capacity line. No. 788 is rated 12 to 20 tons—No. 787, 6 to 11 tons and No. 786, 3 to 6 tons. Has external equalizer connection and can be furnished with No. 790 Distributor with either 6, 12, or 18 openings (1/4" each) for multiple distribution.

Reprints of these articles, punched to fit your service book, available on request. Write for your copy.

DETROIT LUBRICATOR COMPANY Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

DETROIT LUBRICATOR COMPANY

General Offices: 5900 TRUMBULL AVENUE, DETROIT 8, MICHIGAN
Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

Canadian Representatives — RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG

"DL" Heating and Refrigeration Controls • Engine Safety Controls • Safety Float Valves and Oil Burner Accessories • "Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

Gilmer BELTS

You can make quick, easy sales, and count on steady business at all seasons when you sell rugged, long-lived, efficient Gilmer V-Belts.

You can count on customer satisfaction too, for Gilmer V-Belts fit—no repeat calls are necessary. And the low stretch cords assure a permanent fit.

Gilmer V-Belts are supplied in carefully chosen assortments that meet most small belt needs. Get in touch with your jobber today.

L. H. GILMER COMPANY
Tacoma, Philadelphia 35, Pa.
Division of United States Rubber Company

How Can Appliance Salesmen Apply 'Methods' To Improve Sales Effort?

This is another in the series of articles by Mr. Stedman devoted to the problems of compensation for appliance salesmen, and the "methods engineering" which salesmen can apply to make better use of their time, and hence to increase their income.

By Gerald Eldridge Stedman

Careful studies of sales organization leads to the strong conviction that nothing is so definitely important as cooperation. The merchant or sales manager who cannot develop cooperation will find the going rough. Good methods engineering must give considerable attention to it.

There are 16 definite obstacles to cooperation which sales management must be alert to avoid. When any salesman indicates a trend or trait in their direction, he must be set right. They tend to develop slowly but, nipped in the bud, can be corrected. If permitted to go sufficiently far to become a habit, anyone of these negatives can injure or wreck a sales organization.

16 Obstacles

They are: (1) Jealousy, (2) Egotism, (3) Lack of tact, (4) Lack of appreciation, (5) Poor personality, (6) Wrong social contacts, (7) Selfishness, (8) Stubbornness, (9) Lack of information, (10) Lack of self-control, (11) Playing favorites, (12) Shop politics, (13) Intolerance, (14) Narrow-mindedness, (15) Suspicion of motives, and (16) Buck-passing. Methods engi-

neering watches carefully that such obstacles do not develop.

My friend, Thomas Washington Ward, after an able war experience in Procurement for Republic Aviation Corp. at Farmingdale, N. Y., has just returned to the sales field as assistant sales manager of Electronic Corp. of America. Tom has a delightful habit of reporting to me by penny postal cards the unusual experiences of his selling days.

Soon as he returned, he started this habit again and about the third flash out, he scribbled on the edge of the card:

"The selling starts, Jerry, when they say 'NO.' Tom has already done right well in opening dealerships. He is one of the keenest appliance salesmen in the country. This old truism he flashed, shows he is still in the pink with plenty of courage and bang.

Courage and bang come not from knowing many things a little but from knowing a few essential things well. I have seen several sales training courses of the new order that are so profound, I'm afraid I couldn't get through them in three months time. I would be so concerned that

I'd be missing a point for the first while in front of the prospect, I'd be uneasy and tense.

If a sales training course is so complicated as to make the salesman too conscious of what he is trying to remember as he faces the buyer, that isn't good methods engineering.

15-Word Training Formula

To gain courage, confidence, and bang; the salesman must be trained in a simple pattern that works without too much effort at recall. Greatest example of this type of sales training course is one originated by Ray Wright Turnbull, president of Edison General Electric Appliance Co. The course consists of just four general ideas and is expressed in 15 words. It is:

**KNOW YOUR STUFF
SEE A LOT OF PEOPLE
ASK ALL TO BUY
USE COMMON SENSE.**

However your training course is developed, by visual or manual presentation, individually or by meeting schooling, these four central themes are quite enough for an effective sales performance. If the appliance industries could induce each salesman efficiently to do each of those four things, it would have absolutely no worry about inter-industry competition for the consumer dollar in the market scramble ahead.

It is to be remembered that only those who have the patience to do simple things perfectly will acquire the skill to do difficult things easily.

There is little use of learning anything else about selling, if you haven't learned to know your stuff, to be eager to see a lot of people, to have the courage to ask all to buy even after they have said "no" and to use common sense in the technique of your persuasiveness. That is good methods engineering.

Each of these four central themes of the Turnbull formula will naturally have to be torn down into their component essentials in the training procedure. Every able sales manager knows these essentials and I shan't devote detailed space to them here.

On 'Asking All to Buy'

As an example, the theme of "Ask all to buy!", involves gaining favorable reaction to five important buying decisions upon which sales training is vital. They are:

1. The need of the particular prospect.
2. The preferred ability of the product to answer that need.
3. That you and your store are the best person and place to buy it.
4. That the price and terms are advantageous.
5. That the best time to buy or to order is now.

There are 10 essentials involved in the effective registry of a sales impression. Having made a study to find how well star salesmen registered under the most favorable conditions in 1934, I again surveyed this all important matter in the 1941 study of which I have spoken and found that over the seven years, the percentage had scarcely improved at all. Here is perhaps the most vital spot for improvement by better methods engineering.

Leading products in the refrigeration, washing machine, and radio fields were analyzed and all the points under these 10 essentials which a salesman should use in delivering a 100% effective impression were listed on a score card.

I then picked out the best salesmen on the floors of 48 appliance stores and exposed myself to them as a prospect, checking their actual per-

formance with the possible under the most favorable conditions known. Here I was, an interested prospect listening to product demonstration in a confidence-creating store atmosphere. This test took nine weeks to complete.

The results are given in the following table:

Score on Salesman Performance

Impression Essentials	Possible Practical Percentage of Points To Be Scored	Actual Percentage of Points That Were Scored
1. Description of Product Features	100	52
2. Stress on Comparative Advantages	100	20
3. Providing Proof on Each Major Claim	100	6
4. Justifying the Purchase	100	8
5. Appeal to Impelling Motives	100	14
6. Appeal to Senses	100	12
7. Appeal to Buying Reasons	100	20
8. Attempted Agreements on Buying Decisions	100	12
9. Effective Expression and Delivery	100	14
10. Correct Progressive Thought Movement	100	20
Total	1,000	178
Average Effectiveness of Registry		17.8

No theoretical comparative pattern was employed. Only practical selling points and methods of expression which a practical and well trained salesman should use were scored upon. And under the best conditions, the best salesmen clicked less than one fifth as effectively as they should.

Analyze the 'Lost' Sales

So I again say that there is no greater way to increase a salesman's earnings than by improving the impression and expression of his sales presentation. He must get his mind off the one sale he has made and be taught to analyze the reasons why he is losing the four sales he might have. That is good methods engineering.

I am thoroughly convinced that the average salesman, carefully selected by the "Six-F" screening, simply trained in the Turnbull 15 word training course, taught to appreciate the 10 essentials of effective impression registry can, if we will elect to work 10 hours each day, of which 50% of his time shall be in face of the buyer, win the sales expectancy per week that will result in the \$70 weekly income he desires and which should be paid to him on the suggested compensation basis of \$25 weekly subsistence salary plus 10% commission.

In the final article of this series, I shall have much to say about the routing of the sales impression from factory to customer satisfaction, bringing out some of the considerations involved in supervision, tooling, support, and cooperation that will make the highest possible practical sales achievement at the lowest selling cost. This, too, is a matter of good methods engineering.

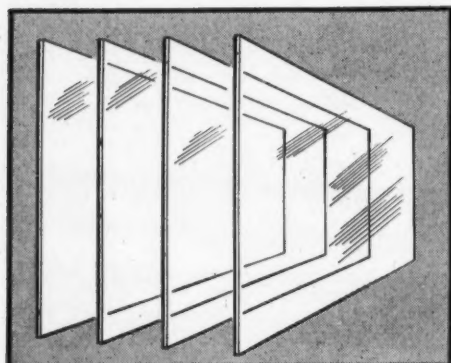
By comparison—
You'll buy **PAR**
REFRIGERATION EQUIPMENT
WRITE FOR CATALOG
Lynch
MANUFACTURING CORPORATION
DEFIANCE, OHIO, U. S. A.

REDUCE CASE GLAZING COSTS

with

Thermopane

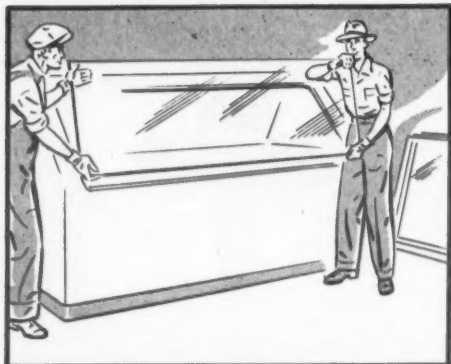
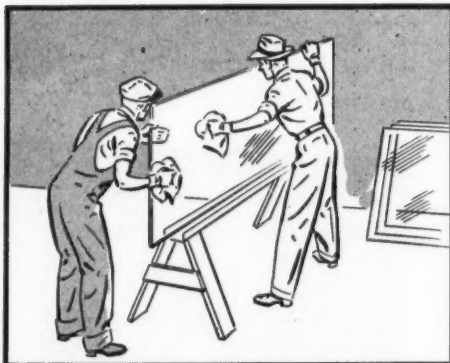
REGISTERED U. S. PATENT OFFICE



with ordinary glass...

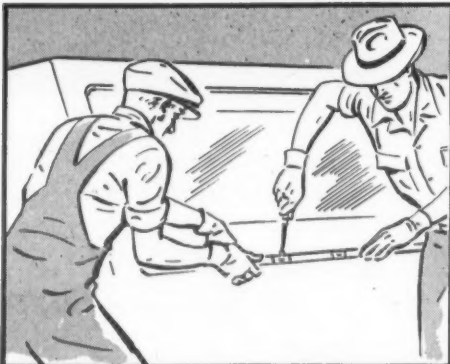
Four pieces of glass are necessary to glaze most frozen food cabinets.

And there are still four pieces of glass TO BE CLEANED—on both sides.



These same four pieces of glass must be installed in the case by manual labor.

AND—these same four pieces of glass must be hand-sealed against moisture and dirt infiltration.

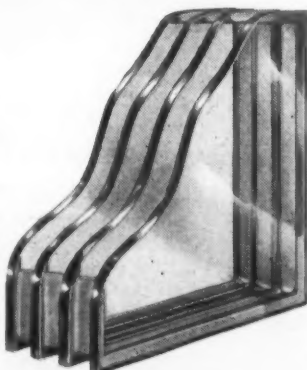


BUT WITH THERMOPANE ONLY 2 STEPS ARE REQUIRED!

Thermopane comes to you as a single unit...all ready to install—like a single light of glass. Its two inner surfaces were scientifically cleaned at the factory...and the entire edge is sealed against dirt and moisture infiltration by the patented *Bondermetic Seal*.

All you have to do is (1) Clean the two outer surfaces of the unit...(2) Seal the unit in the opening. No extra

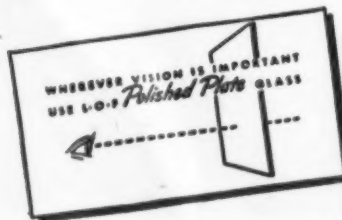
fuss. No extra bother. Time saved. Money saved. Labor cut to a minimum. So when you plan your frozen food cases, be sure to specify *Thermopane*—made to size at our factory—so that you can cut your glazing time. For the new Don Graf's Technical Sheets on *Thermopane*, write Libbey-Owens-Ford Glass Company, 66115 Nicholas Building, Toledo 3, Ohio.



Thermopane is also available in Canada.



LIBBEY-OWENS-FORD
a Great Name in GLASS



.... MODERN
EFFICIENT
ECONOMICAL
REFRIGERATION

DOLE Vacuum COLD PLATES
Maximum Refrigeration Efficiency
for all REFRIGERATION PURPOSES

Largest Manufacturers of Plate Type Evaporators

DOLE REFRIGERATING COMPANY
5910 North Pulaski Road, Chicago 30, Illinois
New York Branch, 103 Park Avenue, New York 17, N. Y.

Wins Promotion



J. J. DONOVAN

Donovan Heads Airtemp Eastern Division

DAYTON, Ohio—J. J. Donovan has been appointed Eastern divisional manager of Airtemp division, Chrysler Corp., D. W. Russell, president, announces.

Mr. Donovan's new position calls for coordination of all merchandising effort in the Boston, New York, Philadelphia, and Washington regions, included in the Eastern division, Mr. Russell states. He was formerly New York regional manager of Airtemp. Robert Friedel succeeds him in his former position, it was announced at the same time.

Frigidaire Expansion Planned In Canada

TORONTO, Ontario, Canada—An expansion program calling for the expenditure of about \$2,000,000 is to be undertaken by Frigidaire Products of Canada, Ltd., Leaside, Ont., a Toronto suburb, it is announced by W. C. Cannon, president and general manager.

Plans include construction of a new power plant and new porcelain plant and utilization of three buildings near the main plant which now are only partly occupied. When construction and tooling are completed, production capacity and employment will be triple the prewar level, according to Mr. Cannon.

The company expects electric refrigerators, home freezers, and electric ranges to start rolling out of the plant around the end of October.

Quillen Resumes Freezer Manufacture; Wins 'E'

INDIANAPOLIS—Quillen Refrigerator Co. here, which manufactured portable refrigerating units during the war, is returning to the manufacture of a new home freezer and other frozen food units for use in retail stores, it has been announced.

The company received the Army-Navy "E" award for its war production efforts. Clarence Quillen, head of the company, and Stanley C. Bell, general manager, direct the company's affairs.

Cooling More Essential In Pharmacy Field

CLEVELAND — Development of new drugs and growth in knowledge of old ones are making refrigeration's role in the field of pharmacy an increasingly important one, it is noted by Dr. Arthur P. Wyss, dean of the school of pharmacy at Western Reserve university here.

Without refrigerated storage, penicillin and many other important pharmaceuticals may deteriorate, Dr. Wyss says, in warning pharmacists to keep drugs in a refrigerator. The dean's advice is that "The alert pharmacist will provide adequate refrigerated space for these products, and it is his responsibility to instruct the users regarding the proper storage conditions of such medications."

Dr. Wyss points out that certain

vitamins in water solution lose strength less readily if kept cold. Other products he lists as benefitting from storage under refrigeration include solution of magnesium citrate, fluid extract of ergot, various biologicals such as diphtheria and scarlet fever anti-toxins, epinephrine or adrenalin solutions, epinine and all injections of insulin. Ointments containing animal fats or vegetable oils will develop rancidity less rapidly when stored in a refrigerator, the dean states.

Refrigeration Repairs, Inc.

Formed In Buffalo

BUFFALO—Refrigeration Repairs, Inc., has been incorporated here with a capital of 200 shares. Incorporators are Norman J. Del, Deborah Levy, and Sara R. Oronzi, all of Buffalo.

Airtemp Products Get OPA Ceiling Prices

WASHINGTON, D. C. — Ceiling prices to dealers and consumers on refrigeration and summer and winter air conditioning equipment manufactured by Chrysler Corp. have been set by OPA in Order 21 to MPR 591 as follows:

1. Maximum net prices for these commodities to "Specialty Dealers" will be the regularly determined rates plus 20%.
2. The price to "Standard Dealers" will be that figure plus 33 1/4%.
3. To consumers, the maximum net figure multiplied by 1.7777, rounded off to the nearest dollar.

The above prices are subject to the usual discounts, freight and crating charges, and allowances and services available to or used by the seller

under similar conditions in March, 1942.

The order stipulates that purchasers are to be notified, in dollars and cents figures, both in sale and resale transactions, of the prices set up by the seller. Allowable transportation charges are to be indicated.

Milwaukee Dealers

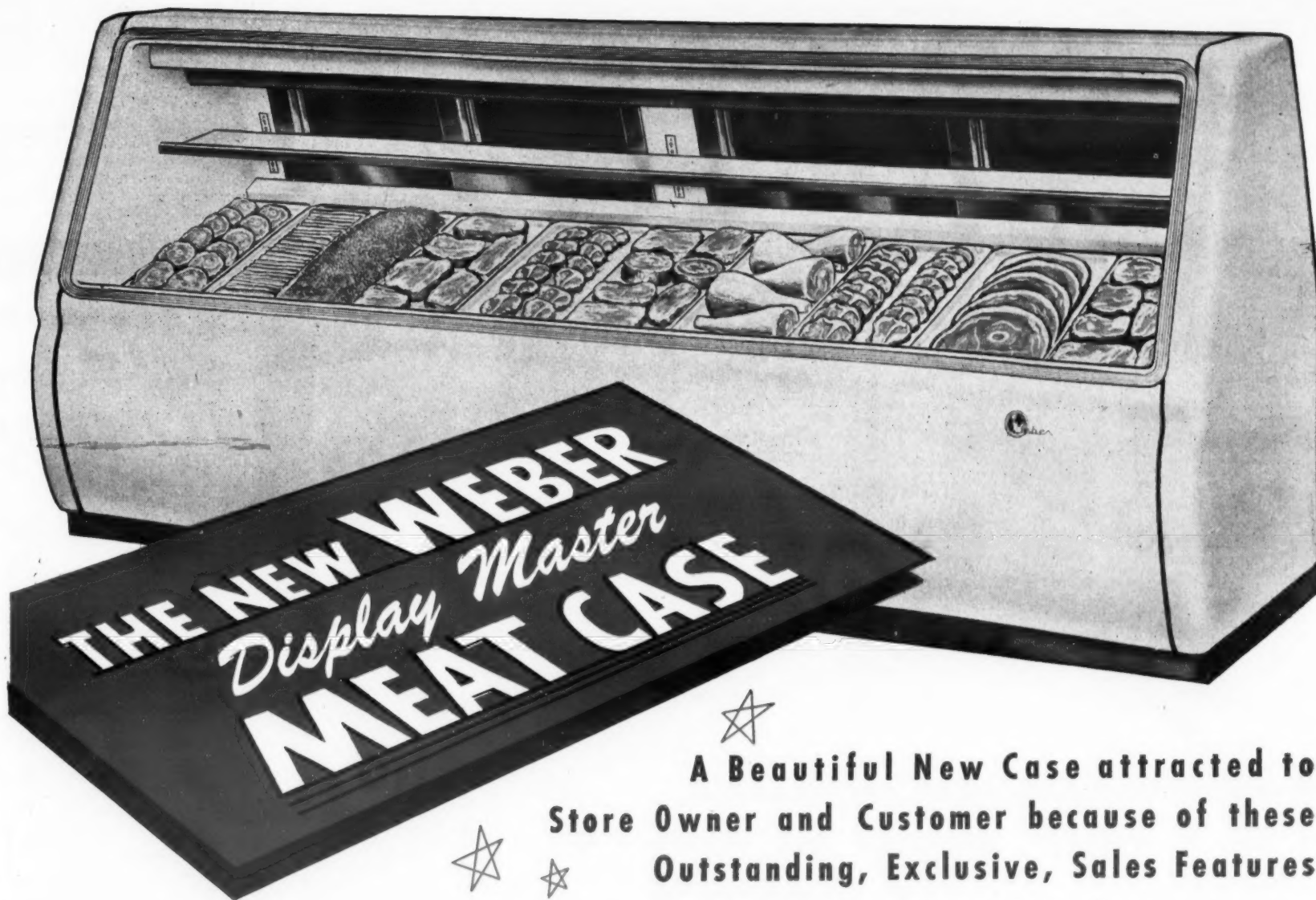
Revive Association

MILWAUKEE — Membership drive has been started by the Wisconsin Radio, Refrigeration & Appliance Association following a decision of the executive committee to revive the organization on a dues-paying basis Jan. 1, according to H. L. Ashworth, secretary-manager.

Early in January it is planned to hold an evening dinner, and thereafter business meetings will be held every two months.

DEALERS!

HERE'S ANOTHER WEBER
PRODUCT WITH OVERWHELMING SELLING ADVANTAGES



A Beautiful New Case attracted to
Store Owner and Customer because of these
Outstanding, Exclusive, Sales Features

VISIBILITY Customers have better view of merchandise because of the wire glass surface.

BETTER DISPLAY The meat racks are adjustable to any angle, enabling the butcher to tilt platter as desired.

EASIER ACCESS Larger service doors provide shorter reach, easier access to contents of case.

GLASS CAN BE EASILY REPLACED In case of broken glass there is no necessity to dismantle case. Simply take off front moulding to lift out glass.

MEZZANINE SHELF Double duty cases are equipped with top shelf having fluorescent light on under side. Single duty mezzanine shelf without light available on order.

The new Weber Meat Display Case is typical of Weber's leadership in the refrigeration and store equipment fields.

ELIMINATES DUPLICATE END When two or more cases are put together in continuous line-up, the ends of the cases may be removed, increasing width of the mullion, thus saving space and improving appearance.

Mail this coupon today for full information on the easiest selling merchandise in America.

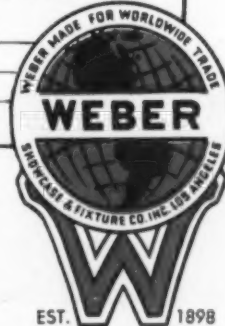
Weber Showcase & Fixture Co., Inc., Dept. "C"
5700 Avalon Boulevard, Los Angeles, California
Gentlemen:

Kindly send me complete data on the following Weber franchises:
☐ Soda Fountains ☐ Commercial Refrigeration Equipment ☐ Ice Cream Cabinets, Frosted Food Cabinets ☐ Home Cabinets, Farm Cabinets ☐ Walk-In Cooler Low Temperature Equipment.

Name _____

Company _____

Address _____



PLAN YOUR FUTURE WITH **WEBER** TIME-PROVEN EQUIPMENT
WEBER SHOWCASE & FIXTURE CO., INC., 5700 AVALON BLVD., LOS ANGELES 54, CALIF.
LOS ANGELES • EL PASO

COOL DRINKING WATER ALWAYS AVAILABLE

OASIS
Electric
WATER COOLERS

OASIS means the best in clean, correctly cooled drinking water... 24 hours a day year in year out! Made by EBCO... pioneers in electric water coolers.

EBCO Mfg. Co.
401 W. Town Street
Columbus, 8, Ohio

Bowen
REFRIGERATION
SUPPLIES, INC.

Atlanta Jacksonville
Tampa Charlotte

"The South's Largest
Refrigeration Supply Jobber"

Packaged Produce Kept Under Cooling Preferred by Shoppers, Test Shows

Foods Stay Fresh Longer; Spoilage Greatly Reduced, A & P Stores Find

By Phil B. Redeker

COLUMBUS, Ohio—The A & P Food Stores chain has made its first report on its experiments here in merchandising packaged fresh fruits and vegetables through mechanically refrigerated "self-serve" type of store fixtures, and the reports indicate that the experiment was highly successful from all standpoints.

In its report A & P said that "the two-fold possibility of providing consumers with farm-fresh produce throughout the year and substantially reducing the nation's estimated 25% waste and spoilage of fresh fruits and vegetables is indicated after two years of a college-industry experiment."

COOPERATING FIRMS

This experiment in the merchandising of fresh fruits and vegetables was conducted in cooperation with Ohio State university, which is located in Columbus. Other organizations cooperating in the work included the Hussmann Refrigeration Co. of St. Louis, the du Pont Co., the Ohio Boxboard Co. of Rittman, Ohio, and the Oliver Machinery Co. of Grand Rapids, Mich.

Seven A & P self-serve super-

markets have been used in the test work in Columbus. A wide variety of fruits and vegetables are packaged and then set out for selection by customers in the open, refrigerated display cases. Not only have tremendous savings been shown by reductions in spoilage, but customers have expressed themselves in rapturous terms about the packaged, non-wilted merchandise which they buy at no extra cost.

Scientific tests definitely demonstrated that the packaged produce, displayed under refrigeration, retains its original freshness and vitamin content one to five days longer than produce handled in the conventional manner of retail stores, according to Frank McGeough, head of the A & P Food Stores Columbus unit.

Sharp reductions in waste and spoilage were also noted, while surveys revealed a marked preference by customers for this method of handling fruits and vegetables which had not repeatedly been picked over.

Dr. Charles W. Hauck, of Ohio State university's department of rural economics, who has had a large part in the experimental work, pointed out that the packaging and refrig-

eration had lengthened the life span and helped retain the vitamin content of every item studied.

"The experiment has been underway for two years and every one connected with it is satisfied that this is one way of reducing waste and spoilage," said Dr. Hauck. "Eventually we hope the packaging will be done at the farm or processing plant and that substantial benefits will be gained by growers who will not lose through waste and spoilage or on the freight charges for the inedible parts of the produce now thrown away."

'IDEAL FLOW' OF PERISHABLES

The "ideal flow" of perishables from farm to consumer, some of those connected with the test work believe, would begin with a grading-and-packing plant in the field, where vegetables would be cleaned, trimmed, chilled, and wrapped.

They would then be transported in refrigerated trucks or cars to refrigerated warehouses and then carried by refrigerated trucks to the store, where they would be displayed in the open-type refrigerated display cases.

As examples of the far-reaching effects of the experiment on waste and spoilage, Mr. McGeough pointed to packaged, refrigerated green beans, 100% salable at the end of five days, but which are a complete

'Produce Department of Tomorrow'



The "produce department of tomorrow" may well be the proper caption for this picture, which shows a customer at one of the A & P stores in Columbus, Ohio, selecting packaged foods from the self-service refrigerated display cases.

loss at the end of that period when unrefrigerated. Parsley, the same; spinach, 90% salable at the end of that period, compared with a complete loss at the end of 24 hours when not handled in such a manner.

Peas and carrots retained their full freshness under the new method, but lost 75% of it in five days under present handling procedures; tomatoes and head lettuce were also 100% fresh with packaging and refrigeration and lost 50% of it without such protection.

It is also reported that sales of produce in the super-markets where the refrigerated, packaged items are available run consistently higher than those which don't have it.

"Customers first like the con-

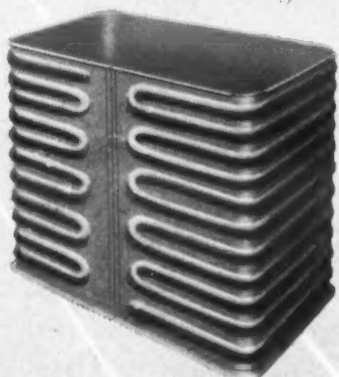
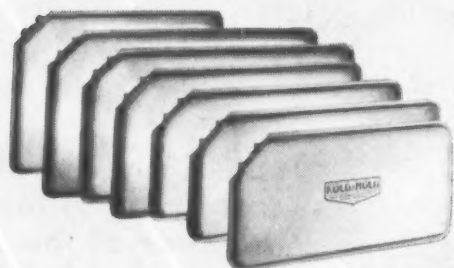
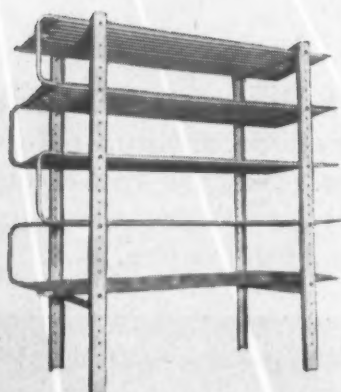
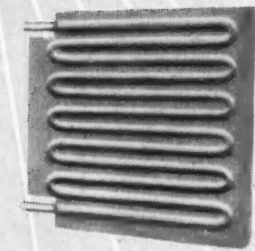
venience in buying, but in the long run it's the keeping quality of the produce that they get to appreciate the cost," store managers have reported.

Dr. Hauck and his associates are interested in the experiment primarily from the standpoint of eliminating waste through spoilage.

Spoilage affects the grower by lowering his price and overall income from his food, it cuts the grocer's profit, and it penalizes the ultimate consumer. Government officials have estimated that 20% of leafy green vegetables are lost through handling in stores and in the home, and that a third of all produce is lost between

(Concluded on next page)

KOLD-HOLD LOW SIDES HAVE APPLICATIONS Unlimited



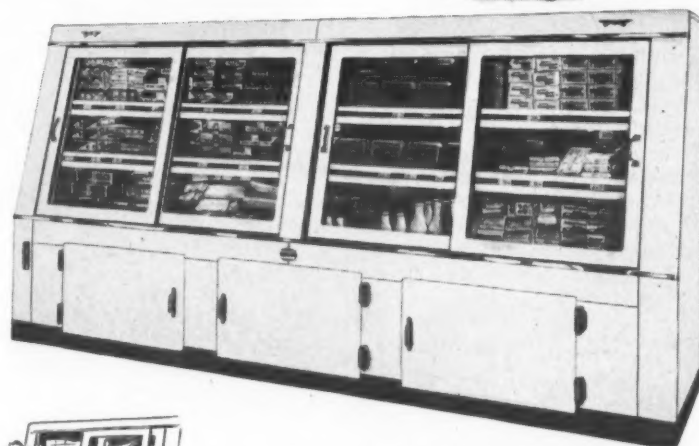
For locker plant space cooling, for shelves and stands in sharp freezing, or as cabinet liners, Kold-Hold Quick-Action Serpentine Plates, either wall mounted or in ceiling banks, have no equal in efficiency and dependability. In truck refrigeration, Kold-Hold streamlined "Hold-Over" Plates maintain the temperature of delivery truck bodies at the uniform level necessary in the successful transportation of fresh meat, ice cream and frozen foods. Specify Kold-Hold Low Sides for the most modern, efficient and economical method of refrigeration. Write today for complete data and engineering assistance.

KOLD-HOLD MANUFACTURING CO.
500 N. GRAND AVE. LANSING 4, MICHIGAN

"WHEN I OPEN MY OWN Self-Service STORE IT'S SHERER EQUIPMENT I WANT!"



"Before I went into service I saw what a great job Sherer Equipment was doing in the market where I worked. Made up my mind that my own self-service store after the war would be Sherer equipped... and that's for sure!" Sherer distributors have a wonderful equipment story for men like this... a story that means VOLUME and PROFITABLE SALES!



VEGETABLES... DAIRY CASES... REACH-IN REFRIGERATORS... WALK-IN COOLING ROOMS... MEAT & DELICATESSEN DISPLAY CASES... FREEZERS... all will be included in the Sherer franchise.

Serve-self food stores must have self-service produce and dairy displays to get maximum volume and profit... commercial refrigeration dealers must have them to sell.

Smart are the distributors who have planned to go ahead with Sherer. They know that Sherer self-serve display and storage cases for produce and dairy products are the best to be had—designed for the job, efficient in performance, economical in operation. For bigger and better business, your customers will favor the Sherer line!

SHERER

REFRIGERATOR PRODUCTS

SHERER-GILLET CO., Marshall, Mich.

Here's the Package



Closeup of type of consumer size package used in Columbus A & P stores at the present time.

Food Keeps Better At Home, Too

(Concluded from preceding page) the grower's field and the consumer's plate.

Cost of providing proper protection through refrigeration and packaging is said to run only a fraction of a cent per package, and the elimination of the spoilage factor permits the goods so fixed to be sold at no higher cost.

One big factor in the popularity of the packaged produce among customers is said to be their discovery that it keeps so much better once they get it home.

The experiments on fruits and vegetables are said to have stemmed from the success that Mr. McGeough had in some work he did on merchandising packaged meat cuts and cheese through the open-type refrigerated cases made by Hussmann.

Mr. McGeough had attended a meeting at which Dr. Hauck was discussing methods of improving the marketing of produce. He got to talking with the university representative and found him enthusiastic about any plan to reduce spoilage. Mr. McGeough suggested the experiments with the refrigerated cases, and the others involved in the tests were then drawn into the picture.

Original work on packaging and testing were made in the A & P's Columbus warehouse, where the remarkable results previously mentioned in this article were discovered. These tests also revealed that the chilled produce retained its vitamin content much better.

TOP QUALITY POSSIBLE

One thing that the test showed is that the food stores can purchase top grade produce at a premium price, but sell it at a competitive price because they will not have any spoilage or "throw out" merchandise, and thus realize as great or greater a profit.

Dr. Hauck is so sold on the idea of refrigerated protection for fruits and vegetables that he has given some thought to methods for handling larger quantities—such as pecks and bushels.

He thinks it might be done by providing an insulated, air conditioned room, which would be separated by insulating type of glass construction from the rest of the store, and fitted with a double door with ante room between which would permit customers to push their carts through without too great a loss of refrigeration effect.

Customer Is Told Why It's Better



C. J. McDonald, manager of one of the seven super-markets where this experiment in food handling and selling is underway explains advantages of packaged produce to a customer.

B. P. Edelman Partner In Evaporative Cooler Firm

DALLAS, Tex. — B. P. Edelman, former general sales manager for the U. S. Air Conditioning Corp., Minneapolis, announces his new affiliation as a partner in the Alton Co., manufacturer of evaporative cooling equipment, here.

The company expects to have its

first evaporative cooling equipment ready for distribution within 60 days, Mr. Edelman states. Assisting him as chief of engineering and production is Ward Thorton, who has been associated with the field of comfort cooling for a number of years.

Mr. Edelman joined the U. S. Air Conditioning Corp. in 1929 and was named general sales manager in 1938, a position which he held until recently.

'Pinocchio' Line of Freezers & Commercial Equipment Announced by New York Firm

NEW YORK CITY—The Complete Refrigerator Sales Co. has entered the manufacturing field, manufacturing three lines of freezers and refrigerator goods here, William J. Penachio, president, announces.

The three lines of goods being made are the Pinocchio food freezers for homes, farms, stores, and institutions; the Pinocchio refrigeration line, and the CRSCO line.

The Pinocchio food freezers being made consist of wall freezers, sliding glass freezers, slatted solid lock and hinge type freezers particularly suited to the self-service market.

Types of freezers found in the Pinocchio line under the above classifications include the Pinocchio self-service double duty glass display freezer, the chest type storage freezer, the chest type flip lid freezer for Bird's Eye Food, and the glass sliding top freezer.

Rounding out the line are the storage walk-in type, the open type freezer, the Pinocchio island freezer type, the wall type freezer, and the Pinocchio cold plates.

The Pinocchio refrigeration line is made up of refrigeration equipment designed for many types of stores and business establishments.

Equipment manufactured in this line, particularly for stores dealing in beverages, includes the Pinocchio beverage chests with food compartment, the beverage chest counter type, Pinocchio beer coolers, and beer dispensers.

Of especial interest to delicatessen

and grocery store owners are the Pinocchio delicatessen open front and back display case, the double duty open front and back case, the single duty open front and back case, the Pinocchio walk-in case, and the Pinocchio wall vegetable and dairy box.

Manufactured chiefly for bakery and restaurant use are the bain-Marie sandwich case, bakery refrigeration cases, luncheon display cases, and dough retarding cases.

Larger equipment being manufactured under this line includes compressors from sizes 1/4 hp. to 25 tons, Pinocchio evaporator coils, evaporator blowers, florist boxes, meat and walk-in compartment coolers, and storage equipment for self-service wall shelf counters and islands.

The CRSCO line features farm freezers in 2 to 6-cu. ft. capacities, ice cream cabinets, etc.

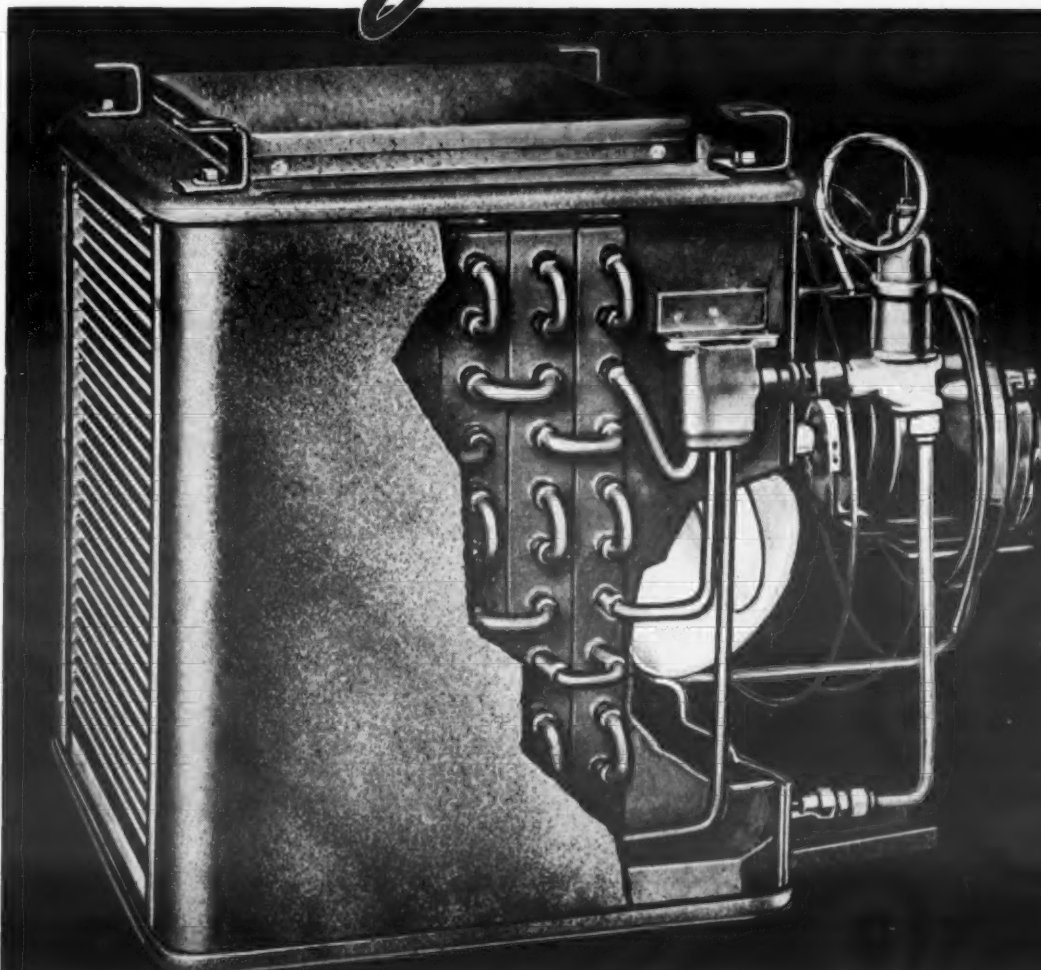
Valley Equipment Is Schaefer Distributor

CHARLESTON, W. Va. — Valley Equipment Co., Inc., 1004 Kanawha Blvd. E., Charleston, W. Va., has been appointed by Schaefer, Inc., as distributor of "Pak-A-Way" home and farm freezers, frosted food cabinets, and ice cream cabinets in that territory.

Officers of the distributorship are: A. E. Teagan, president; and G. C. Hyder, secretary-treasurer.

CARRIER SUSPENDED BLAST FREEZERS

Specially Designed for Limited Space!



CEILING-SUSPENDED

Carrier Blast Freezers are ideal cold diffusers for distributing low-temperature conditioned air in rooms of restricted size. For walk-in installations as well as those of the reach-in cabinet type, they provide highly effective fast-freezing, while conserving valuable space.

FASTER FREEZING

is a special advantage of all Carrier Blast Freezers. They actually freeze faster at zero than other methods at 20° below! Of course, they can be operated at any desired freezing temperature—utilizing quick action with less cold to double production!

WATER DEFROSTING

is another very important feature of Carrier Blast Freezers—eliminating fogged rooms and water spillage.

- Suspended type available in four sizes, 0.1 to 1.8 tons.
- Floor Mounted type, 1 to 14 tons. Write for information.

Frozen Foods

— a billion dollar market

THE FREE BOOKLET

"Frozen Foods . . . a Billion Dollar Market" describes all types of Carrier Blast Freezers—and shows you how conveniently they can be adapted to your particular requirements. Write for your free copy today!

CARRIER CORPORATION • SYRACUSE • N. Y.

Carrier

AIR CONDITIONING • REFRIGERATION
INDUSTRIAL HEATING

Commercial REFRIGERATION

AMANA MODERN

- DISPLAY CASES
- COOLERS
- REFRIGERATORS
- HOME FREEZERS

AMANA SOCIETY
AMANA, IOWA

KRACK ENGINEERED

UNIT COOLERS
FIN COILS
AIR CONDITIONING

Refrigeration Appliances, Inc.
923 W. Lake St., Chicago 7, Ill.

Joins Westinghouse



GRACE B. RINARD

Grace Rinard Heads Home Economics Tests

MANSFIELD, Ohio — Appointment of Grace B. Rinard as supervisor of testing and research work at the Home Economics Institute of the Westinghouse Appliance division was recently announced by Mrs. Julia Kiene, director of the Institute.

Miss Rinard will be in charge of all testing done on Westinghouse appliances in the Institute.

A native of Michigan, Miss Rinard received her Bachelor of Science degree in home economics at Michigan State Normal College, after which she taught school.

7 Firms Get OPA Ceilings

WASHINGTON, D. C. — Maximum ceiling prices to distributors, dealers, and consumers for food freezers and refrigerators manufactured by seven companies were established recently by the Office of Price Administration under MPR 591 as follows:

Farm Freezers

Cooler Corp., Duluth, Minn.: Model F-155, capacity 15 cu. ft., condensing unit 1/2 hp., prices to distributors, dealers, and consumers, respectively: \$220 \$284 \$440.

Henry Colder Co., Milwaukee, Wis.: Model 1200, capacity 12 cu. ft., condensing unit 1/4 hp., prices to distributors, dealers and consumers: \$178 \$214 \$356.

Model 1600, 16 cu. ft., 1/2 hp.: \$230 \$276 \$460.

R. M. Erdin, East Hartford, Conn.: No model numbers given; capacity 11 cu. ft., condensing unit 1/4 hp.: \$210 \$252 \$420.

15 cu. ft., 1/2 hp.: \$254 \$305 \$508.

26 cu. ft., 1/2 hp.: \$360 \$432 \$720.

Reach-In Refrigerators

Harder Refrigerator Corp., Cobleskill, N. Y. (division of Tyler Fixture Co., Niles, Mich.): Models HU-18F and HU-18D, capacity 18 cu. ft., no condensing unit rating given, prices to distributors, dealers, and consumers: \$357 \$416.50 \$595.

These same models less compressor and valve: \$267 \$311.50 \$445.

Home or Commercial Freezers

Reveco, Inc., Deerfield, Mich.: Model Z-20, no capacity or condensing unit data given, prices to industrial users, distributors, dealers, and consumers:

\$180 \$118 \$142 \$236.

Model FF-60, 6.2 cu. ft., 1/2 hp., prices to distributors, dealers, and consumers: \$135 \$156 \$260.

Consolidated Conditioning Corp., Mt. Vernon, N. Y.: Model 60 L, capacity 6 cu. ft., condensing unit 1/4 hp., prices to distributors, dealers, and consumers: \$155 \$186 \$310.

Model 60 L deluxe, 6 cu. ft., 1/4 hp.: \$160 \$192 \$320.

Model 90 L, 9 cu. ft., 1/2 hp.: \$190 \$228 \$380.

Model 120 L, 12 cu. ft., 1/2 hp.: \$210 \$252 \$420.

Model 160 L, 16 cu. ft., 1/2 hp.: \$280 \$336 \$560.

Model 210 L, 21 cu. ft., 1/2 hp.: \$360 \$432 \$720.

Complete Refrigerator Sales Co., 92 Seventh Ave., New York City: Model ADAFF-10, no capacity given, condensing unit 1/4 hp., prices to distributors, dealers, and consumers: \$170 \$204 \$340.

Model ODAFF-15, 10.7 cu. ft., 1/2 hp.: \$200 \$240 \$400.

Model EBA-10, 11.2 cu. ft., 1/2 hp.: \$200 \$240 \$400.

Model ODAFF-20, 15.2 cu. ft., 1/2 hp.: \$250 \$300 \$500.

Model EBA-20, 20.1 cu. ft., 1/2 hp.: \$322 \$375 \$624.

Model ODAFF-30, 23.5 cu. ft., 1/2 hp.: \$345 \$414 \$690.

Model ODAFF-40, 30.8 cu. ft., 1/2 hp.: \$415 \$498 \$830.

The ceilings listed above are subject to the usual discounts, allowances, charges for freight and crating, and the rendition of services observed under similar circumstances back in March, 1942.

Refrigerators on Sale At Last



Detroit shoppers get their first view of the new postwar Frigidaire on sale at a large department store recently. No one seems greatly interested now in the commercial boxes lining the walls, although this store featured these large units in recent months.

Future Success Depends on Top-Notch Job of Selling Now, Warns J. J. Nance

NEW YORK CITY — Discounting the view that customers with accumulated billions will come clamoring to spend these funds, James J. Nance, vice president of the Zenith Radio Corp., asserted in an address here, that industry must now do a vital selling job, on which "depends free enterprise and America's future."

Speaking at a meeting of the Sales Executives Club of New York, Mr. Nance declared that the "Achilles heel" of industry is its inability to create sustained demand for merchandise, particularly consumer durable goods which must pace the entire business activity of the nation to new highs.

He referred to the pent-up "urgent, pressing" demand by consumers as a mere fraction of what the theorists have predicted, and said that sales-minded management must hold up national income and consumer expenditures "to levels that come at least close to those of wartime boom years."

"This time we must do it without the aid of the enormous government deficits which financed the war," he declared. "There is no question in my mind but that industry is on trial today as it never has been before."

Terming inflation a much-advertised "boogy-boo," Mr. Nance contended that the all-time high produc-

tive capacity of the nation renders fears of real inflation groundless.

He warned against over-pricing as a dangerous policy, recalling that "it was the fantastic price structure of 1921 that led to the buyer's strike."

Rebuilding of sales staffs with youthful timber was recommended by the speaker, who warned against creating too many retail outlets.

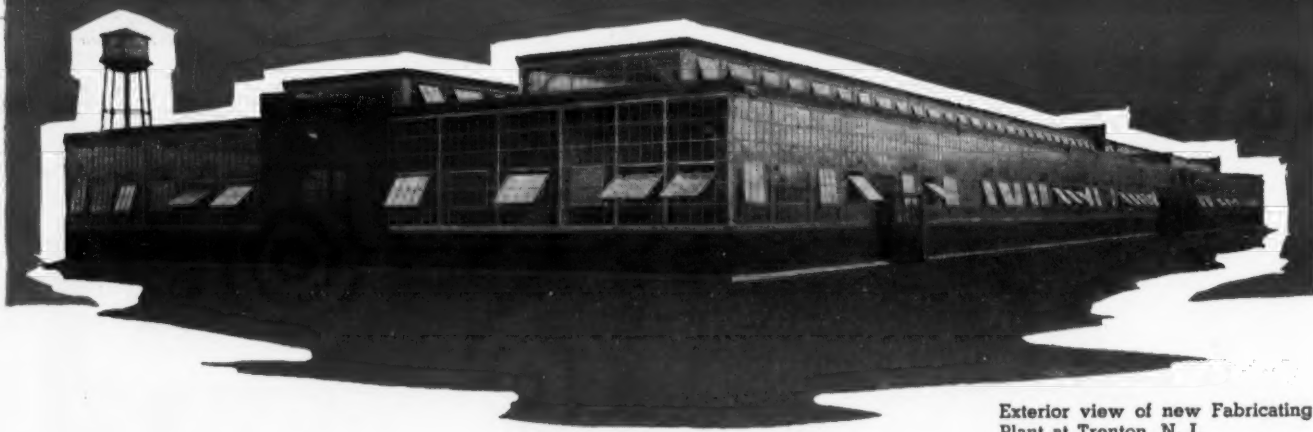
Mr. Nance said the radio industry could satisfy the most optimistic estimates of consumers within a year, although many war-born uses for electronic equipment will aid in keeping factories humming.

Birrell & Felt Named To Anemostat Board

NEW YORK CITY — Lowell M. Birrell and Irving M. Felt were named to the posts of chairman of the board of directors and director of the firm, respectively, at the Anemostat Corp. of America, air conditioning equipment manufacturer here.

Mr. Birrell is also president of Claude Neon Lights Co., Inc., and Greater New York Industries, Inc. here, while Mr. Felt holds presidential positions at the Union Aircraft Products Corp. and the Jefferson Travis Corp.

PANELYTE ADDS 60,000 MORE SQ. FT. OF MODERN FABRICATING SPACE



Exterior view of new Fabricating Plant at Trenton, N. J.

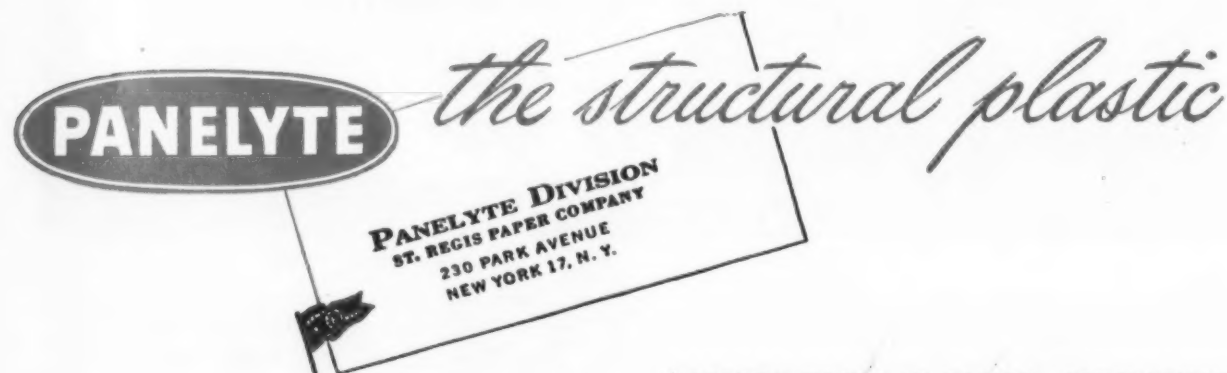
THIS expansion was necessary because of the requirements of the refrigeration industry for Panelyte insulating fabricated parts and rods and tubes.

Parts can be supplied of Panelyte's odorless grade, and to match colored breaker strips. Irregularity of shape or intricacy of design are not obstacles as Panelyte can be lathe-turned, milled, drilled, die punched, sawed, knurled, grooved or shaved.

Panelyte Service is preferred because it eliminates time-wasting experiment.

Panelyte parts improve the product or simplify its assembly . . . save weight . . . speed production.

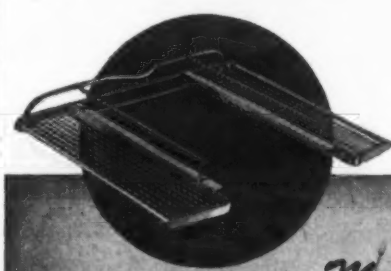
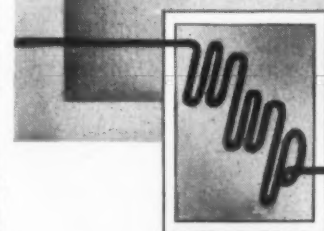
The addition of new machinery and machine tools to our existing inventory of equipment will enable us to deliver on schedule regardless of quantity involved. Please get in touch with our nearest office.



★RECORD MAKER IN DESIGN, DEVELOPMENT AND MASS PRODUCTION OF STRUCTURAL RESINOUS LAMINATED PARTS FOR THE REFRIGERATOR INDUSTRY

Sales Offices: Atlanta, Boston, Chicago, Cincinnati, Cleveland, Dallas, Denver, Detroit, Kansas City, Los Angeles, Nashville, New Orleans, Phoenix, Portland, St. Louis, St. Paul, San Francisco, Seattle, Syracuse, Trenton: Buenos Aires, Johannesburg, Mexico City, Montreal, San Jose, Sao Paulo, Sydney, Toronto, Vancouver.

FOR STAINLESS STEEL REFRIGERATOR SHELVES WHY NOT TALK OVER YOUR PROBLEMS WITH THE LEADING MANUFACTURER OF STAINLESS STEEL SHELVES?



WALL WIRE PRODUCTS COMPANY

11333 GENERAL DRIVE PLYMOUTH, MICHIGAN

Makers of STAINLESS STEEL AND RETINNED REFRIGERATOR SHELVES AND WELDED WIRE PRODUCTS

Inside Dope

By George F. Taubeneck

(Continued from Page 1, Column 1)

Methods to enforce such rights must be devised.

The machinery of ascertaining rights and defining them must be local, simple, and effective.

Appeal to established courts of justice must be arranged to the end that all matters may be decided calmly and dispassionately.

Since labor has become a national issue and a national responsibility, a national law is needed. Makeshift provisions will not suffice.

A draft of a proposed labor law has been devised by A. W. Robertson, Chairman of Westinghouse Electric Corp. And it's pretty good.

It is not our thought that Mr. Robertson said the last word, or that everyone will agree with his ideas.

But we hope it is a start, and that it will aid those responsible for preparing such laws.

Prompt action is needed to prevent grave threats to our peace and security.

Herewith we present:

A Proposed Labor Act to diminish the causes of labor disputes burdening or obstructing interstate and foreign commerce, to create a General Labor Board, and for other purposes.

Be it enacted by the Senate and the House of Representatives of the United States of America in Congress assembled,

FINDINGS AND POLICY

SECTION 1. Since the passage of the "National Labor Relations Act" the procedure of collective bargaining has developed certain weaknesses which should be corrected, and further, causes for disputes have arisen which require solution. Furthermore, the procedures set forth in said Act have become burdensome and are impractical in part for handling numerous problems of labor relations, both among unions and between unions and employers. These defects have a tendency to interfere with proper relations between employees and employers and to deter a satisfactory solution of the general labor problem and to cause strikes and other forms of industrial strife or unrest, which have the intent or the necessary effect of burdening or obstructing commerce by (a) impairing the efficiency, safety, or operation of the instrumentalities of commerce; (b) occurring in the current of commerce; (c) materially affecting, restraining, or controlling the flow of raw materials or manufactured or processed goods from or into the channels of commerce, or the prices of such materials or goods in commerce; or (d) causing diminution of employment and wages in such volume as substantially to impair or disrupt the market for goods flowing from or into the channels of commerce.

DEFINITIONS

SECTION 2. When used in this Act—

(1) The term "person" includes one or more individuals, partnerships, associations, corporations, legal representatives, trustees, trustees in bankruptcy, receivers, or labor organizations.

(2) The term "employer" includes any person acting in the interest of an employer, directly or indirectly, but shall not include the United States, or any State or political subdivision thereof, or any person subject to the Railway Labor Act, as amended from time to time.

(3) The term "employee" shall include any employee, and shall not be limited to the employees of a particular employer, unless the Act explicitly states otherwise, and shall include any individual whose work has ceased as a consequence of, or in connection with, any current labor dispute or because of any unfair labor practice, and who has not obtained any other regular and substantially equivalent employment, but shall not include any individual employed as an agricultural laborer, or in the domestic service of any family or person at his home, or any individual employed by his parent or spouse, or any supervisory employee.

(4) The term "representatives" includes any individual or labor organization.

(5) The term "labor organization" means any organization of any kind, any agency or employee representa-

tion committee or plan, in which employees participate and which exists for the purpose, in whole or in part, of dealing with employers concerning grievances, labor disputes, wages, rates of pay, hours of employment, or conditions of work.

(6) The term "commerce" means trade, traffic, commerce, transportation, or communication among the several States, or between the District of Columbia or any Territory of the United States and any State or other Territory, or between any foreign country and any State, Territory, or the District of Columbia, or within the District of Columbia or any Territory, or between points in the same State but through any other State or any Territory or the District of Columbia or any foreign country.

(7) The term "affecting commerce" means in commerce, or burdening or obstructing commerce or the free flow of commerce, or having led or tending to lead to a labor dispute burdening or obstructing commerce or the free flow of commerce.

(8) The term "unfair labor practice" means any unfair labor practice listed in section 8.

(9) The term "labor dispute" includes any controversy concerning terms, tenure, or conditions of employment, or concerning the association or representation of persons in negotiating, fixing, maintaining, changing, or seeking to arrange terms or conditions of employment or concerning conditions created by contending labor unions or organizations in the matter of jurisdiction, regardless of whether the disputants stand in the proximate relation of employer and employee.

(10) The term "General Labor Board" means the General Labor Board created by section 3 of this Act.

(11) The term "Referee" means any General Labor Referee appointed by the General Labor Board.

GENERAL LABOR BOARD

SECTION 3. (a) There is hereby created a board, to be known as the "General Labor Board" (hereinafter referred to as the "Board"), which shall be composed of six members who shall be citizens of the United States and appointed by the President of the United States, by and with the advice and consent of the Senate.

At least one of the said members shall be a duly qualified lawyer. The President shall designate the Chairman and Vice Chairman of the Board from the members of the Board. Three members shall constitute a quorum. A vacancy in the Board shall be immediately filled by the President and such vacancy shall not impair the right of the remaining members to exercise all the powers of the Board. Any member of the Board may be removed by the President, upon notice and hearing, for neglect of duty or malfeasance in office, but for no other cause. The term of office shall be for five years, except that any individual chosen to fill a vacancy shall be appointed only for the unexpired term of the member whom he shall succeed.

(b) The Board shall have an official seal which shall be judicially noticed.

(c) The Board shall at the close of each fiscal year make a report in writing to Congress and to the President stating in detail the cases it has heard, the decisions it has rendered, the names, salaries, and duties of all employees, Referees, and officers in the employ or under the

supervision of the Board, and an account of all moneys it has disbursed. The report shall give a summary of the main and more important decisions of the Referees and the number of all such decisions rendered.

SECTION 4. (a) Each member of the Board shall receive a salary of \$10,000 a year, shall be eligible for reappointment, and shall not engage in any other business, vocation, or employment while a member of the Board. The Board shall appoint, without regard for the provisions of the Civil Service laws but subject to the Classification Act of 1923, as amended, General Labor Referees (hereinafter called "Referees"), who shall be citizens of the United States, in such localities as it may deem necessary for the proper administration of this Act. The salary of the Referee shall be \$6,000 a year and such Referees shall hold their appointments at the pleasure of the Board. The Board shall also appoint, without regard for the provisions of the Civil Service laws but subject to the Classification Act of 1923, as amended, an executive secretary, and

(Continued on next page)

THIS USER KNOWS



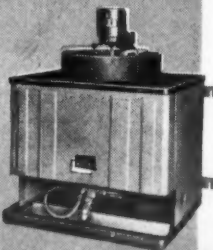
Max Weisberg of Jo-Mac Super Market, St. Louis, Missouri, says — I have used an AMCOIL FOOD CONDITIONER in my cooler for some time and know it helps to retain the natural freshness and bloom of the meats. I have never had any losses through trimming of meats, thanks to AMCOIL'S definite control of humidity which practically eliminates dehydration and shrinkage.

UTILITY DOWN-DRAFT UNITS

Specially designed to meet the demands for a compact, efficient, wall-mounted unit.

Model	BTU/HR 15" MTD	List Price
UD-7	1,250	\$ 89.00
UD-17	2,250	99.00
UD-27	3,000	109.00
UD-37	4,200	129.00
UD-47	5,600	149.00
UD-57	7,800	169.00
UD-77	11,000	209.00
UD-127	15,000	319.00
UD-167	23,000	369.00

*WITH HEAT EXCHANGER
Expansion Valves and
Controls not included in
list prices.



AMCOIL NOW FEATURES

The new moderately priced utility cooling units, namely:—

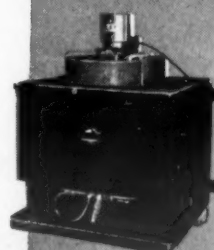
The UDF Food Conditioners for preservation of fresh and perishable foods where the control of high humidity is a factor, and the regular UD models for the storage of package commodities.

UTILITY FOOD CONDITIONER

A low-priced unit which ideally supplements the Amcoil Deluxe model.

Model	BTU/HR 15" MTD	List Price
UDF-19	1,950	\$139.00
UDF-29	2,700	149.00
UDF-39	3,500	179.00
UDF-49	5,300	199.00
UDF-59	7,500	219.00
UDF-79	10,700	239.00
UDF-129	14,000	374.00
UDF-169	22,000	434.00

*WITH HEAT EXCHANGER
Humidifier included in list
prices; valves, controls,
etc., extra.



Streamlined, wall-mounted, down-draft unit for back-bar or under-counter coolers, reach-in and walk-in boxes. A space-saver supreme! Field-tested, and consumer-acceptance proved!

JOBBER-DEALERS
investigate these latest
AMCOIL profit makers

Big sales opportunities for dealers in this low-priced unit that combines many features of the De Luxe Food Conditioner. For high relative humidities up to 85%, and temperatures down to 36° F.

STEP UP YOUR SALES AND PROFITS WITH THESE NEW AMCOIL MODELS

DE LUXE FOOD CONDITIONER

A complete refrigeration system, except for condensing unit, which automatically preserves food without dehydration or shrinkage in Reach-In and Walk-In Coolers.

Model	BTU/HR 15" MTD	List Price
FC-50	7,500	\$233.00
FC-80	11,300	378.00
FC-130	17,000	601.00
FC-160	22,600	641.00



ALSERVICE REACH-IN PANEL UNIT

A compact cooling unit for all refrigeration applications. Designed to meet a growing demand for medium-capacity units to balance condensing units of 1/4, 1/2, 3/4 or 1 hp. Especially suited for reach-in and small walk-in boxes where temperatures of 36° F. are required.

Model	BTU/HR 15" MTD	List Price
R1-15	2,000	\$ 94.00
R1-20S	3,600	129.00
R1-25	2,250	99.00
R1-30	3,000	114.00
R1-40	5,250	149.00
R1-45	6,150	169.00



CILING MOUNTED TWO-WAY MODEL UW UNITS

Discharges cooled air in two directions distributing it evenly over entire cooler.

Model	BTU/HR 15" MTD	List Price
UW-39	2,200	\$129.00
UW-39	3,200	160.00
UW-49	4,200	190.00
UW-59	5,800	204.00
UW-79	9,000	255.00

DISTRICT OFFICES

Philadelphia Office: H. H. McTurk, Mgr.
3310 Spring Garden Street
Chicago Office: H. C. Moore, Mgr.
215 W. Ontario Street

MANUFACTURERS' REPRESENTATIVES

J. J. Madden, 212 Madison St., Dedham, Massachusetts
William D. Keefe, Chaffee, New York
E. J. Oliphant & Co., 505 Uhler Bldg., Marion, Ohio
Jordy Engineering Co., Inc., 813 Howard Ave., New Orleans, La.
Robbins-Greenwood Co., 3104 Main St., Houston 4, Texas
Ernest Darwin Corporation, P.O. Box 2654, Charlotte 1, North Carolina



AMERICAN COILS CO.

25-27 LEXINGTON STREET - NEWARK 5, N. J.

Inside Dope

By George F. Taubeneck

(Continued from preceding page)

such attorneys and other employees with regard to existing laws applicable to the employment and compensation of officers and employees of the United States, as it may from time to time find necessary for the proper performance of its duties and as may be from time to time appropriated for by Congress.

(b) Upon the appointment of the six members of the Board and the designation of the chairman, the National Labor Relations Board created under the National Labor Relations Act shall cease to exist. All records, papers, and property of the National Labor Relations Board, and all unexpended funds and appropriations for the use and maintenance of the National Labor Relations Board shall become funds and appropriations available to be expended by the Board in the exercise of the powers, authority, and duties conferred on it by this Act.

(c) All of the expenses of the Board, including all necessary traveling and subsistence expenses outside the District of Columbia incurred by the members or employees of the Board under its orders, shall be allowed and paid on the presentation of itemized vouchers therefore approved by the Board or by any individual it designates for that purpose.

SECTION 5. The principal office of the Board shall be in the District of Columbia, but it may meet and exercise any or all of its powers at any other place. The Board may, by one

or more of its members or by such agents or agencies as it may designate, prosecute any inquiry necessary to its functions in any part of the United States. A member who participates in such an inquiry shall not be disqualified from subsequently participating in a decision of the Board in any case resulting from or connected with such inquiry.

SECTION 6. The Board shall have authority from time to time to make, amend, and rescind such rules and regulations as may be necessary to carry out the provisions of this Act. Such rules and regulations shall be effective upon publication in the manner which the Board shall prescribe.

RIGHTS OF EMPLOYEES, EMPLOYERS, AND THE BOARD

SECTION 7. Employees shall have the right to self-organization, to form, join, or assist labor organizations, to bargain collectively through representatives of their own choosing, and to engage in concerted activities, for the purpose of collective bargaining or other mutual aid or protection.

Employers shall have the right to manage their own plants and properties, choose their own employees, discharge their own employees, and enjoy full freedom of speech.

The Board shall exercise the jurisdiction herein conferred upon it without interference by others and with a view of quickly and efficiently settling labor disputes and labor matters which may be before it so as to encourage good labor-management relationship.

SECTION 8. (a) It shall be an unfair labor practice for an employer—

(1) To interfere with, restrain, or coerce employees in the exercise of

the rights guaranteed employees in section 7.

(2) To dominate or interfere with the formation or administration of any labor organization or contribute financial or other support to it: Provided, That subject to rules and regulations made and published by the Board pursuant to section 6, an employer shall not be prohibited from permitting employees to confer with him on any subject during working hours without loss of time or pay.

(3) By discrimination in regard to hire or tenure of employment or any term or condition of employment to encourage or discourage membership in any labor organization: Provided, That nothing in this Act, or in the National Industrial Recovery Act (U.S.C., Supp. VII, title 15, secs. 701-712), as amended from time to time, or in any code or agreement approved or prescribed thereunder, or in any other statute of the United States, shall preclude an employer from making an agreement with a labor organization (not established, maintained, or assisted by any action defined in this Act as an unfair labor practice) to require, as a condition of employment, membership therein, if such labor organization is the representative of the employees as provided in section 9 (a), in the appropriate collective bargaining unit covered by such agreement, when made.

(4) To discharge or otherwise discriminate against an employee because he has filed charges or given testimony under this Act.

(5) To refuse to bargain collectively with the representatives of his employees, subject to the provisions of section 9 (a).

(b) It shall be an unfair labor practice for a union or labor organi-

zation or individual employee—

(1) To interfere with the rights guaranteed employers in section 7.

(2) To threaten or coerce employers by boycott.

(3) To make, publish, or issue misleading or untrue statements about the business activities or operations of any employer.

(4) To promote strikes when an employer is abiding by a decision of the Board or Referee on the issue in dispute other than the issue of closed shop, maintenance of membership, check-off, or compulsory arbitration.

(c) It shall be an unauthorized act for the Board—

(1) To discriminate among or between labor unions and organizations.

(2) To impose upon employers a closed shop, maintenance of membership, check-off, compulsory arbitration, or any other obligations which are inconsistent with the fundamental rights guaranteed by the Constitution.

(3) To interfere with freedom of speech.

REPRESENTATIVES AND ELECTIONS

SECTION 9. (a) Representatives designated or selected for the purposes of collective bargaining by the majority of the employees in a unit appropriate for such purposes, shall be the exclusive representatives of all the employees in such unit for the purposes of collective bargaining in respect to rates of pay, wages, hours of employment, or other conditions of employment: Provided, That any individual employee or a group of employees shall have the right at any time to present grievances to their employer.

(b) The Board shall decide in each case whether, in order to insure to employees the full benefit of their right to self-organization and to collective bargaining, and otherwise to effectuate the policies of this Act, the unit appropriate for the purposes of collective bargaining shall be the employer unit, craft unit, plant unit, or subdivision thereof.

(c) Whenever a question affecting commerce arises concerning the representation of employees, the Board may investigate such controversy and certify to the parties, in writing, the name or names of the representatives that have been designated or selected. Employers shall have equal rights with employees and labor organizations to petition the Board for such investigation and certification. In any such investigation, the Board shall provide for an appropriate hearing upon due notice, either in conjunction with a proceeding under section 10 or otherwise, and may take a secret ballot of employees, or utilize any other suitable method to ascertain such representatives.

(d) Whenever an order of the Board made pursuant to section 10 (c) is based in whole or in part upon facts certified following an investigation pursuant to subsection (c) of this section, and there is a petition for the enforcement or review of such order, such certification and the record of such investigation shall be included in the transcript of the entire record required to be filed under subsections 10 (e) or 10 (f), and thereupon the decree of the court enforcing, modifying, or setting aside in whole or in part the order of the Board shall be made and entered upon the pleadings, testimony, and proceedings set forth in such transcript.

PREVENTION OF UNFAIR LABOR PRACTICES

SECTION 10. (a) The Board and any Referee is empowered, as hereinafter provided, to prevent any person from engaging in any unfair labor practice (listed in section 8) affecting commerce. This power shall be exclusive, and shall not be affected by any other means of adjustment or prevention that has been or may

be established by agreement, code, law, or otherwise.

(b) Whenever it is alleged in a petition duly filed by any employee, employer, labor organization or any other person that any person has engaged in or is engaging in any such unfair labor practice, the Board, or any Referee shall have power to issue and cause to be served upon such person a copy of the petition and a notice of hearing before the Board or Referee at a place therein fixed, not less than five days after serving of a copy of the petition. Any such petition may be amended at any time prior to the issuance of an order based thereon. The person so complained of shall have the right to file an answer to the original or amended petition and to appear in person or otherwise and give testimony at the place and time fixed in the petition. In the discretion of the Board or Referee conducting the hearing, any other person may be allowed to intervene in the said proceeding and to present testimony.

(c) The testimony taken by the Referee or the Board shall be reduced to writing. Thereafter, in its discretion, the Board or Referee upon notice may take further testimony or hear argument. If upon all the testimony taken the Board or Referee shall be of the opinion that any person named in the complaint has engaged in or is engaging in any such unfair labor practice, then the Board or Referee shall state its findings of fact and shall issue and cause to be served on such person an order requiring such person to cease and desist from such unfair labor practice, and to take such affirmative action, including reinstatement of employees with or without back pay, as will effectuate the policies of this Act. Such order may further require such person to make reports from time to time showing the extent to which it has complied with the order. If, upon all the testimony taken, the Board or Referee shall be of the opinion that no person named in the complaint has engaged in or is engaging in any such unfair labor practice, then the Board or Referee shall state its findings of fact and shall issue an order dismissing the said petition.

(d) Until a transcript of the record in a case shall have been filed in a court, as hereinafter provided, the Board or Referee may at any time, upon reasonable notice and in such manner as it shall deem proper, modify or set aside, in whole or in part, any finding or order made or issued by it.

(e) The Board or Referee shall have power to petition any district or circuit court of appeals of the United States (including the Court of Appeals of the District of Columbia), within any circuit or district, respectively, wherein the unfair labor practice in question occurred or wherein such person resides, for the enforcement of such order and for appropriate temporary relief or restraining order, and shall certify and file in the court a transcript of the entire record in the proceeding, including the pleadings and testimony upon which such order was entered and the findings and order of the Board or Referee. Upon such filing, the court shall cause notice thereof to be served upon such person, and thereupon shall have jurisdiction of the proceeding and of the question determined therein, and shall have power to grant such temporary relief or restraining order as it deems just and proper, and to make and enter upon the pleadings, testimony, and proceedings set forth in such transcript a decree enforcing, modifying, and enforcing as so modified, or setting aside in whole or in part the order of the Board or Referee. No objection that has not been urged before the Board or Referee shall be considered by the court, unless the failure or neglect to urge such objection shall be excused because of extraordinary circumstances. If either party shall apply to the court

(Concluded on next page)

JORDON

Refrigerators



BEST IN
DESIGN

BEST IN
OPERATION

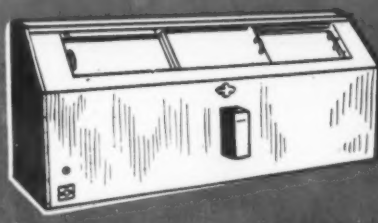
BEST IN
PRICE

AMERICA'S BEST LINE OF COMMERCIAL REFRIGERATORS

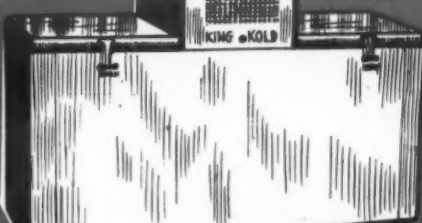
POST-WAR COMPETITION is here. NOW, you can't offer prospects "just anything." Make certain you have a practical and serviceable product . . . JORDON Commercial Refrigerators is your answer to a buying market. Our prices are OPA or below.

**TERRITORIES FOR WHOLESALE FACTORY
REPRESENTATIVES OPEN! WRITE OR WIRE!**

Items Now Available



DRY BEVERAGE COOLERS



HOME & FARM FREEZER



DIRECT DRAW
BEER COOLER

DISTRIBUTORS

WRITE NOW FOR A
FRANCHISE ON
AMERICA'S NEWEST AND
MOST COMPLETE LINE OF
COMMERCIAL REFRIG-
ERATORS. STEPPING UP
PRODUCTION WILL SEE
MORE UNITS JOIN OUR
FULL LINE

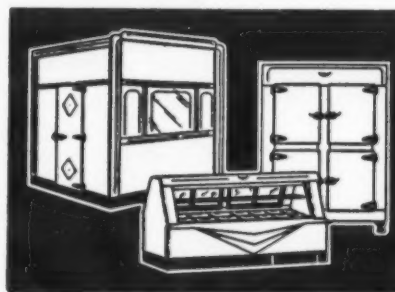
JORDON REFRIGERATOR COMPANY

SALES DIVISION

235 No. BROAD ST., PHILA. 7 PA.

Phone RITtenhouse 6359

FACTORY—PHILADELPHIA, PA.



GET SET WITH FOGEL

INQUIRE NOW ABOUT OUR
COMPLETE LINE

INTERESTING PROPOSITION
TO QUALIFIED DISTRIBUTORS

A FEW TERRITORIES
STILL AVAILABLE

FOGEL REFRIGERATOR COMPANY Since 1899
5400 Eadom St., Philadelphia 37, Pa.

Inside Dope

By George F. Taubeneck

(Concluded from preceding page)

for leave to adduce additional evidence and shall show to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for the failure to adduce such evidence in the hearing before the Board or Referee, the court may order such additional evidence to be taken before the Board or Referee and to be made a part of the transcript. The Board or Referee may modify the findings as to the facts, or make new findings, by reason of additional evidence so taken and filed, and the Board or Referee shall file such modified or new findings, which, if supported by substantial competent evidence, shall be conclusive, and shall file recommendations, if any, for the modification or setting aside of the original order. The jurisdiction of the court shall be exclusive and its judgment and decree shall be final, except that the same shall be subject to review by the appropriate circuit court of appeals if application was made to the district court as hereinabove provided, and by the Supreme Court of the United States upon writ of certiorari or certification as provided in sections 239 and 240 of the Judicial Code, as amended (U. S. C., title 28, secs. 346 and 347).

(f) Any person aggrieved by a final order of the Board or Referee granting or denying in whole or in part the relief sought may obtain a review of such order in any district court or circuit court of appeals of the United States in the district or circuit wherein the unfair labor practice in question was alleged to have been engaged in or wherein such person resides, or in the Court of Appeals of the District of Columbia, by filing in such court a written petition praying that the order of the Board or Referee be modified or set aside. A copy of such petition shall be forthwith served upon the Board or Referee and thereupon the aggrieved party shall file in the court a transcript of the entire record in the proceeding, certified by the Board or Referee including the pleading and testimony upon which the order complained of was entered and the findings and order of the Board or Referee. Upon such filing, the court shall proceed in the same manner as in the case of an application by the Board or Referee under subsection (e), and shall have the same exclusive jurisdiction to grant to the Board or Referee such temporary relief or restraining order as it deems just and proper, and in like manner to make and enter a decree enforcing, modifying, and enforcing as so modified, or setting aside in whole or in part the order of the Board or Referee.

(g) The commencement of proceedings under subsection (e) or (f) of this section shall, unless otherwise specifically ordered by the court, operate as a stay of the Board's or Referee's order.

(h) When granting appropriate temporary relief or a restraining order, or making and entering a decree enforcing, modifying, and enforcing as so modified, or setting aside in whole or in part the order of the Board or Referee as provided in

this section, the jurisdiction of courts sitting in equity shall not be limited by the Act entitled "An Act to amend the Judicial Code and to define and limit the jurisdiction of courts sitting in equity, and for other purposes," approved March 23, 1932 (U.S.C., Supp. VII, title 29, secs. 101-115).

(i) Petitions filed under this Act shall be heard expeditiously, and if possible within ten days after they have been docketed.

(j) In the event a petition is filed with a Referee in the first instance he may at his own instance, or shall upon the written request of either party, refer the petition to the Board for hearing and further consideration or the Board may in its own discretion instruct the Referee to refer such petition to it for such hearing and consideration. Unless the foregoing action is taken within ten days after the filing of the petition the case shall be heard by the Referee.

INVESTIGATORY POWERS

SECTION 11. For the purpose of all hearings and investigations, which, in the opinion of the Board or Referee are necessary and proper for the exercise of the powers vested by section 9 and section 10—

(1) The Board or any Referee shall at all reasonable times have access to, for the purpose of examination, and the right to copy any evidence of any person being investigated or proceeded against that relates to any matter under investigation or in question. Any member of the Board or Referee shall have power to issue subpoenas requiring the attendance and testimony of witnesses and the production of any evidence that relates to any matter under investigation or in question, before the Board or Referee conducting the hearing or investigation. Any member of the Board or Referee may administer oaths and affirmations, examine witnesses, and receive evidence. Such attendance of witnesses and the production of such evidence may be required from any place in the United States or any Territory or possession thereof, at any designated place of hearing.

(2) In case of contumacy or refusal to obey a subpoena issued to any person, any District Court of the United States or the United States courts of any Territory or possession, or the Supreme Court of the District of Columbia, within the jurisdiction of which the inquiry is carried on or within the jurisdiction of which said person guilty of contumacy or refusal to obey is found or resides or transacts business, upon application by the Board or Referee shall have jurisdiction to issue to such person an order requiring such person to appear before the Board or Referee, there to produce evidence if so ordered, or there to give testimony touching the matter under investigation or in question; and any failure to obey such order of the court may be punished by said court as a contempt thereof.

(3) No person shall be excused from attending and testifying or from producing books, records, correspondence, documents, or other evidence in obedience to the subpoena of the Board or Referee on the ground that the testimony or evidence required of him may tend to incriminate him or subject him to a penalty or forfeiture; but no individual shall be prosecuted or subjected to any pen-

alty or forfeiture; for or on account of any transaction, matter, or thing concerning which he is compelled, after having claimed his privilege against self-incrimination, to testify or produce evidence, except that such individual so testifying shall not be exempt from prosecution and punishment for perjury committed in so testifying.

(4) Complaints, orders, and other process and papers of the Board or Referee may be served either personally or by registered mail or by telegraph or by leaving a copy thereof at the principal office or place of business of the person required to be served. The verified return by the individual so serving the same setting forth the manner of such service shall be proof of the same, and the return post office receipt or telegraph receipt therefor when registered and mailed or telegraphed as aforesaid shall be proof of service of the same. Witnesses summoned before the Board or Referee shall be paid the same fees and mileage that are paid witnesses in the courts of the United States, and witnesses whose depositions are taken and the persons taking the same shall severally be entitled to the same fees as are paid for like services in the courts of the United States.

(5) All process of any court to which applications may be made under this Act may be served in the judicial district wherein the defendant or other person required to be served resides or may be found.

(6) The several departments and agencies of the Government, when directed by the President, shall furnish the Board or Referee upon request, all records, papers, and information in their possession relating to

any matter before the Board or Referee.

SECTION 12. Any person who shall willfully resist, prevent, impede, or interfere with any member of the Board or Referee in the performance of duties pursuant to this Act shall be punished by a fine of not more than \$5,000 or by imprisonment for not more than one year, or both.

LIMITATIONS

SECTION 13. All Acts and parts of Acts in conflict with the provisions of this Act are repealed, including the National Labor Relations Act. Nothing in this Act, however, shall be construed as repealing the Railway Labor Act, as amended, which shall continue in full force and effect, nor shall anything in this Act be construed as repealing the War Labor Disputes Act which shall continue in full force and effect in accordance with Section 10 of said Act. The National War Labor Board established by Executive Order numbered 9017, dated January 12, 1942, shall hereafter only have the powers bestowed upon it by the War Labor Disputes Act and the powers bestowed upon it by the President and other Acts which have to do only with adjustments of wages and the approval of wages and then only during the duration of the war, and all other powers such as jurisdiction over labor disputes are hereby conferred upon the General Labor Board created by this Act.

SECTION 14. Wherever the application of the provisions of section 7 (a) of the National Industrial Recovery Act (U. S. C., Supp. VII, title 15, sec. 707 (a)), as amended from time to time, or of section 77B, paragraphs (1) and (m) of the

Act approved June 7, 1934, entitled "An Act to amend an Act entitled 'An Act to establish a uniform system of bankruptcy throughout the United States' approved July 1, 1898, and Acts amendatory thereof and supplementary thereto" (48 Stat. 922, pars. (1) and (m)), as amended from time to time, or of Public Resolution Numbered 44, approved June 19, 1934 (48 Stat. 1183), conflicts with the application of the provisions of this Act, this Act shall prevail: Provided, That in any situation where the provisions of this Act cannot be validly enforced, the provisions of such other Acts shall remain in full force and effect.

SECTION 15. If any provision of this Act, or the application of such provision to any person or circumstance, shall be held invalid, the remainder of this Act, or the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby.

SECTION 16. This Act may be cited as the "General Labor Act."

SPECIFY...

DRYERS
THAT
BEAR
THIS
LABEL

CHARGED
DAVISON'S
SILICA GEL
WITH

—the label that is your guarantee of maximum performance and satisfaction. Your jobber stocks it—for refilling and in factory charged dryers.



.... ON BEING SEEN ... NOT HEARD

Once in awhile he could do it... If he tried real hard... If he could think kinda heavy about things around the room... Then he could—just sit...

Got awful tiresome tho'—sittin' not talkin'... He wondered now and then, if Mom wasn't askin' a lot... Each time before company came, she reminded: "Children should be SEEN NOT HEARD".

Yes, it was askin' a lot... Just the same as it would be for grown-ups... We can all be SEEN NOT HEARD—once in awhile.

Our quality, dependability and service can be seen... But we get so eager to talk to you about our Seamless Copper and Brass Tubing, that the words must spill out... Let us tell you about our products—at your convenience... Drop us a line for information...

To be SEEN AND HEARD will be to our mutual interests.

WOLVERINE TUBE DIVISION



Calumet & Hecla Consolidated Copper Co.
1411 CENTRAL AVE., DETROIT 9, MICHIGAN

INSULATING FACTS

FOR COLD STORAGE AND LOCKER PLANT OPERATORS

• Whether you are building or remodeling your cold storage or locker plant, you'll find valuable information in this "HAND BOOK ON COLD STORAGE CONSTRUCTION." It tells how to figure heat loss, how to estimate amount of insulating material needed for a job. It gives helpful details on construction and vapor-proofing. It also explains in detail how and why Redwood BARKWOOL gives you these nine vital advantages:

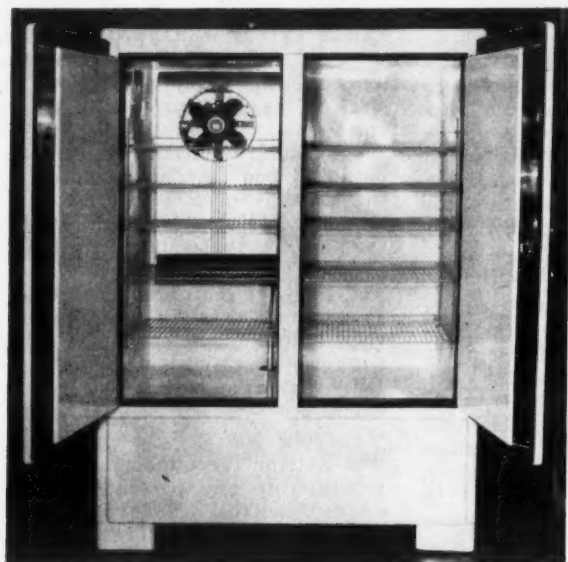
EFFICIENCY • RESISTANCE TO MOISTURE • PERMANENCE • ENDURANCE • UTILITY • FIRE RESISTANCE • ODORLESS • VERMIN REPELLENT • ECONOMY



For your free copy—Address
Redwood Fibre Products Co., Inc.
Dept. E, 228 N. LaSalle St., Chicago 1, Ill.

REDWOOD BARKWOOL INSULATION
A PRODUCT OF
REDWOOD FIBRE PRODUCTS COMPANY, Inc.
SANTA CRUZ, CALIFORNIA





This is one of the new refrigerated cases which Frigidaire is planning to add to its commercial refrigeration line. The products are scheduled to go on sale after Jan. 1.

Complete Line of Cases & Fixtures Planned for Frigidaire Production

DAYTON, Ohio—Frigidaire's commercial refrigeration products will be augmented by a complete line of refrigerated cases and fixtures, it is made known by E. R. Godfrey, general manager of the General Motors Corp.'s division.

The line will include cases, reach-in refrigerators, and walk-in coolers. Future expansions in this field are tentatively scheduled for the second quarter of 1946 by Frigidaire officials.

First available to the public will be six models of reach-in refrigerators, scheduled for marketing in December. The models will be the

20, 30, 50, and 60-cu. ft. type with forced air cooling units, and the 20 and 30-cu. ft. units with ice-making cooling units.

Due for sale after Jan. 1, the cases will be manufactured in 10 styles and sizes. Display cases of the single-duty type will be in 10 and 12-ft. lengths, double-duty cases in 6, 8, 10, and 12-ft. lengths. Plans also call for a 6-ft. length full-vision case for dairy and delicatessen usage and a double-duty vegetable case in an 8-ft. length.

Date for appearance of the walk-in coolers has not yet been set.

Morton Show Case Co. Leases New Building

DAYTON, Ohio — Morton Show Case Co. here has leased the Barlow building for a rental of approximately \$200,000, thereby acquiring 50,000 sq. ft. of floor space for expansion, President E. George Sanders reported.

Formerly occupied by the U. S. Army Signal Corps, the building was taken over by Morton Nov. 1. "This expansion will probably make our firm the largest store fixture company in the country," declared Mr. Sanders.

Ross & Witmer Named Dealer For Carrier

CHARLOTTE, N. C.—Appointment of Ross & Witmer, Inc., as Carrier Corp. dealer here has been announced by Arthur P. Shanklin, vice president in charge of dealer sales for Carrier.

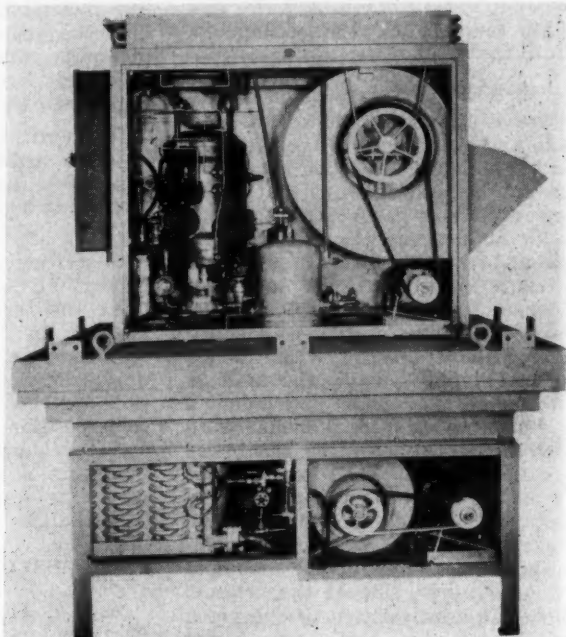
F. H. Ross, Sr. will be president of Ross & Witmer, Inc., at the same time retaining his interests in his own company, the F. H. Ross Mfg. Co. in Charlotte.

C. N. Witmer, who has been connected with Carrier for 15 years in the New York, Philadelphia, Dallas, Houston, and Atlanta offices will now make his headquarters in Charlotte with the newly formed dealership.

New Firm In Buffalo

BUFFALO—A business name has been filed here for the Martzolf Refrigeration Service, 5 Humphrey St., by Frederick A. Martzolf.

This Unit Cools Food on Army Barge



Compactly designed, this Airtemp electrically driven air-cooled refrigeration unit is employed to cool food storage rooms on Army barges.

Designing Compact Cooling Units for Army Barges Will Aid Peacetime Models, Airtemp Head Says

DAYTON, Ohio—The part lessons learned in building the equipment needed to keep G. I. Joe's chow fresh and tasty in torrid climes will play in assuring better postwar air conditioners and refrigeration for American homes and business have been revealed by D. W. Russell, president of Airtemp division, Chrysler Corp. "Designing more compact postwar air conditioners for American homes and business is relatively easy," Mr. Russell states, "compared to the difficulty of rigid space and weight limitations we had to meet on special cooling units for the 'sea-going refrigerators' that were designed to keep Army food fresh while these craft traveled and anchored for weeks in the tropical sun."

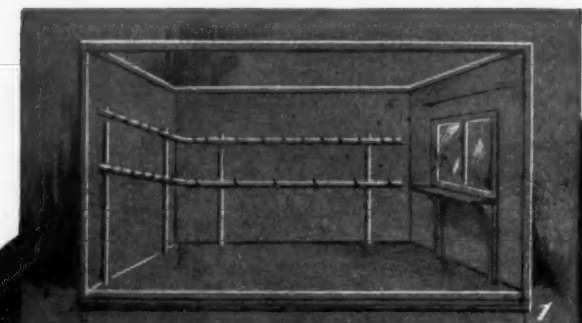
All of the specially constructed Transportation Corps food barges were refrigerated by high capacity Chrysler Airtemp cooling units, Mr. Russell said. Because of the hot sun and metal structure of the craft, it was necessary to add 6 in. of cork insulation to help maintain temperatures at 35° or as low as 10° whenever necessary.

Every "food barge" carried nine portable, completely self-contained refrigerator compartments of the walk-in type. Each box was a complete and separate unit so constructed that it could be placed close to the others to conserve deck space or hoisted ashore.

Each refrigerator box is 24 ft. long, 9 ft. high, and 8 ft. wide. The Airtemp refrigeration unit for each box consists of a single air-cooled, electrically driven, self-contained assembly ready for immediate operation. This equipment is completely automatic, except for defrosting, and power is supplied by engine generators in the barge hold or ashore.

The refrigerating equipment is installed on an insulated hatch. An opening in the roof of each refrigerator box accommodates the unit. Evaporator coils, blower fans, and motor are suspended from the underside of the hatch, so that only the air-cooled condensing unit and controls are carried above the box.

The seal between the hatch and the refrigerator box is airtight and water tight making it completely seaworthy.



A line full of potential profits . . .

a sales policy to help you realize them

IF YOU are established in the refrigeration field, you will be quick to recognize the potential profit in the products illustrated here, for you know the demand among your customers for a quality line of this type.

The Albert H. Bromann Jr. policy of selling only through recognized, established refrigeration outlets protects this profit for you. No product of the Albert H. Bromann Jr. organization will be sold direct to users at any time or under any circumstances.

Our reconversion from war assignments will shortly be achieved with the completion of our new plant. The experienced engineering and skillful workmanship that have always gone into the building of our products will assure even finer quality under improved manufacturing conditions.

Custom Built Products { Complete Cooling Rooms
Cabinets for Industrial
and Commercial Freezers

Standard Products { Cold Storage Doors
Direct Draw Beer Dispensers

If you are interested in handling one of the outstanding quality lines in the refrigeration field on a basis that insures substantial and protected profits, we cordially invite you to get in touch with us.

ALBERT H. BROMANN JR.

GENERAL OFFICES: 4822 WEST CHICAGO AVENUE • CHICAGO 51, ILLINOIS

Service Engineers Should Know . . .

"VIRGINIA" METHYL CHLORIDE IS REALLY LABORATORY TESTED

— the content of each and every container — large or small — is analyzed 3 separate times.



BOILING POINT TEST

1. A measured sample from each cylinder must be water-white in color and when boiled to dryness must record within 25/100 of 1 degree a constant boiling point of minus 23.8°C. This test detects unwanted hydrocarbons, dirt and oil impurities.



ACIDITY TEST

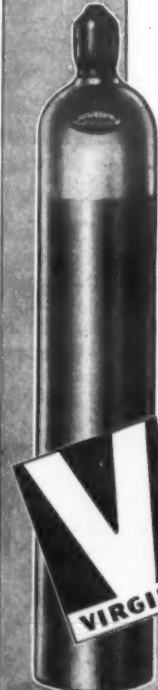
2. The acid content in a sample of known weight must not exceed 6 parts per million; low acidity prevents copper plating and oil sludging.



MOISTURE TEST

3. The moisture in a sample of known weight must not exceed 80 parts per million; — low moisture prevents freezing at expansion valve and refrigerant break-down.

The name "V-METH-L" on the cylinder is your guarantee of quality. Sold by refrigeration supply jobbers everywhere.



VIRGINIA Smelting Co.

WEST NORFOLK, VA.

76 BEAVER ST., NEW YORK 5 • 131 STATE ST., BOSTON 4
Agents for Kinetic's "Freon-12" — "Freon-22" — "Freon-11"



Heads Coil Firm



M. PARCARO

Parcaro Named Gen. Mgr. Of American Coils

NEWARK, N. J.—M. Parcaro has assumed the post of executive general manager at American Coils Co. here, according to T. W. Binder, president.

Although Mr. Parcaro's headquarters will be at the main office and factory here, he will spend much of his time in the field conferring with makers and users of air conditioning and refrigeration equipment.

Prior to joining American Coils Co., Mr. Parcaro was New York regional manager for Penn Electric Switch Co., before which he spent 14 years at Carrier in the research and design sections. He received training in business administration and engineering at the Newark College of Engineering. He is vice chairman of the Northern New Jersey section of A.S.R.E.

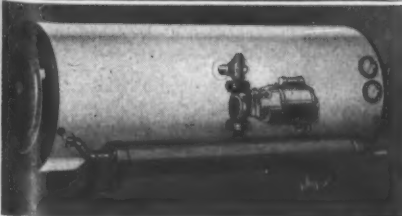
Riley & Graham Manage Amer. Central Districts

CONNERSVILLE, Ind.—Appointment of W. Graham Riley as Chicago district manager and Clyde T. Graham as Dayton, Ohio, district manager for American Central Mfg. Corp. here, has been announced by C. Fred Hastings, general sales manager.

Prior to joining American Central, Mr. Riley had served as Detroit representative for Goodyear Tire & Rubber Co. and with the sales department of Electronic Instrument Co.

Before the war Mr. Graham had been a district manager for Apex Rotarex Corp., and general sales manager of E. H. Ahrens Co., Indianapolis. He comes to American Central from the War Department, having served as Unit Chief, United Nations Bureau, Wright Field.

HIGH SUCTION PROCESS WATER COOLERS



25 to 150 gallon storage capacities.

135 to 1000 G. P. H. recovery capacities.

Suitable for bakery ingredient, jacket cooling, film processing air conditioning or other commercial cooling.

Available with or without agitator pumps.

WRITE FOR LATEST DATA
COOLER DIVISION
DAY & NIGHT MFG. CO.
MONROVIA • CALIFORNIA
FACTORY REPRESENTATIVES
NEW YORK: A. C. Meyer, 522 Edwy. CHICAGO: Marc Shantz, 565 Wash. Blvd.
ST. LOUIS: J. E. Parker, 294 Peachtree, N. E.
R. H. Spangler, 3331 Market St.

Dow, Bartels Join Airtemp Staff

DETROIT—Minor T. Dow and William C. Bartels have joined the merchandising department of Airtemp Division, Chrysler Corp., R. C. Cameron, merchandising manager, announces. Mr. Dow has been named manager of sales training with headquarters, while Mr. Bartels has been added to the merchandising staff.

Mr. Dow will establish a comprehensive sales training program for dealers' personnel, regional managers, district representatives, field engineers, service representatives, and department heads, according to Mr. Cameron.

Before the war Mr. Dow served as Airtemp's assistant service manager. During the war period he acted as liaison specialist between the Dayton home office and various national war agencies in Washington, D. C.

Before joining the staff of Airtemp, Mr. Bartels was associated with Cutler-Hammer at Milwaukee.

Soderberg Returns as Perfex Branch Head

MILWAUKEE—Curtis H. Soderberg has resumed his prewar duties as manager of the Philadelphia office, the Perfex Corp., of Milwaukee, announces.

Mr. Soderberg, who has been associated with the heating industry for the past 17 years, joined the Milwaukee office in July, 1942, where he served as manager of the priorities department and also as liaison man for development engineering.

Fanning Rejoins Connelly Following Army Release

SEATTLE—With 34 months of overseas service in Alaska and the South Pacific behind him, Gilbert F. Fanning is out of the Army Transportation Corps and back in "civvies" at the F. B. Connelly Co. here. Before entering the service as a ship transportation officer, the former lieutenant was the Connelly company's southwest Washington representative.

Fitzpatrick Appointed Crosley Works Manager

CINCINNATI—Appointment of H. J. Fitzpatrick, formerly works manager of Plant 9 of the Crosley Corp. here, as works manager of all Crosley plants in Cincinnati, was announced by Frank A. Schotters, vice president of Crosley in charge of production.

In his new capacity, Mr. Fitzpatrick will have direct supervision of production of Crosley home radio receivers, as all Crosley radio production will be concentrated in its Cincinnati plants. Other products may later be built in the Cincinnati plants.

Before joining the Crosley organization in 1942, Mr. Fitzpatrick served as general production manager with the United Wallpaper Factories, Inc., of Chicago; in executive position with the Nash-Kelvinator Corp. and the Apex Co. of Cleveland and with several automobile companies, including Dodge and Chrysler divisions of Chrysler Corp.

Moves to Bendix



M. R. RODGER

Recently joined Bendix Home Appliances, Inc., as utility sales manager.

6 to 7 Carloads of BENDIX automatic Home Laundries are going to BENDIX Dealers Daily

● They're calling it a reconversion miracle. Well, maybe it is. But miracle or no miracle, the fact stands out that Bendix has accomplished what it wanted to accomplish, by getting Bendix automatic Home Laundries into the hands of its dealers, in quantity, at the very earliest possible moment.

No dealer makes money on a factory's mere promises or good intentions. It's only when a job is done that his pay-off comes.

That's why it's important to remember that Bendix was first with a fully automatic electric "washer";

—that demand for the Bendix has pyramided into the greatest pent-up sales backlog ever accorded any electric "washer", anywhere, any time;

—that Bendix recently introduced another marvel in the Bendix automatic Home Ironer, which does a better job, on a greater variety of garments, and with more ease and simplicity for the operator, than any ironer ever before known.

And now—here's more history—in the fact that Bendix scores again in being "FUSTEST WITH THE MOSTEST."



STANDARD MODEL

BENDIX automatic Home Laundry

Bendix Home Appliances, Inc., South Bend, Indiana . . . Pioneers and Perfectors of the automatic "Washer"



TYPE 895

Henry Valve Co.
1001-19 N. SPAULDING AVE.
CHICAGO

Henry "Y" Strainer

Exceptional design. Hot tin dipped welded steel construction with copper end connections (steel in F.P.T. sizes). Negligible pressure drop. Large screen area with easily removable screen. Light weight. Oil trapping prevented by installing on side or in vertical position.

ASK YOUR JOBBER FOR IT

ANSUL ICE-X IS MAGIC

TRADE MARK

ELIMINATES MOISTURE TROUBLES...DESTROYS ICE AT EXPANSION VALVE!

FOR METHYL CHLORIDE • METHYLENE CHLORIDE AND FREON REFRIGERANT

• Literally searches out and gets rid of moisture trouble anywhere in system...destroys ice at expansion valve so no freeze-up is possible...without harm to refrigerant, oil or any of the parts of the system. Ice-X is the original, fully patented liquid dehydrant.

ORDER FROM YOUR JOBBER OR...

THE HARRY ALTER CO. 1728 S. MICHIGAN AVE. CHICAGO 16, ILLINOIS

JOBBERS: WRITE FOR SPECIAL PROPOSITION!

Postwar Plans of Army Refrigeration Mechanics

By Lt. Don Dickinson,
U. S. Army Corps of Engineers

If it is a problem for industry to find a place for the returning veteran, it is no less important to the soldier himself. With him it is just about the biggest thing in his mind next to actually getting out of uniform and into civilian clothes.

Since being in refrigeration work in the Pacific Theater of Operations the writer has had occasion to work with army refrigeration mechanics from every section of the United States. And to hear their views on the all-important Postwar Future, which to most soldiers is now a very imminent thing indeed.

The ideas of some of these men toward returning to refrigeration or entering the field anew are here presented, that the industry may perhaps gain some impression of what to expect from the returning serviceman with respect to his qualifications and ambitions.

The men who did refrigeration work within the army not only represented all branches of the industry itself, but there was a vast number entirely army-trained, who had had no connection whatsoever with refrigeration as civilians.

Like most army specialists, the refrigeration mechanics were drawn from all walks of civilian life, though, of course, men from the industry predominated. Former factory men, ice plant operators, those who installed the big jobs, as well as those

Lt. Dickinson has been an officer in a refrigeration company of the Corps of Engineers, charged with the maintenance of refrigeration equipment in a Pacific theater of war. This has naturally brought him into contact with many men who were devoting their entire army career to the servicing of mechanical refrigeration equipment.

He has listened to these men make their postwar plans, and observed them at their work, and in this article he describes about what percentage of them plan to continue in refrigeration work after they leave the Army, and what kind of problems both they and their employers may face.

who put in and serviced the smaller commercial machines and domestic refrigerators. And it was this latter group which found itself most at home with army refrigeration.

At overseas bases low pressure installation, maintenance, and repair comprised the bulk of the work. The technical details and the maintenance organization were discussed in two previous articles in AIR CONDITIONING & REFRIGERATION NEWS, on the subject of refrigeration maintenance in the Pacific.

How They Got Into It

The men who became army refrigeration mechanics without benefit of civilian experience could be traced back to tradesmen, farmers, truck drivers, high school students—an endless list of fields not even related to refrigeration. Because of their mechanical inclinations, because of an expressed interest in refrigeration, or sometimes "just because," they were earmarked at the induction center for refrigeration work. Some with the Quartermaster Corps, and the rest with the Engineers.

Both of these branches conducted schools to train refrigeration mechanics. The courses varied from eight to 13 weeks, the average length for army specialist training. Often the facilities of civilian technical institutes and equipment and instruction were utilized, while at other places, the Quartermaster school at Camp Lee, Va., for example, the instruction was army all the way through. In all cases, of course, the training was designed to cover the specific needs of the army.

Now any maintenance man is aware that a refrigeration mechanic cannot be made in two or three months. But anyone who has attended a concentrated army specialist course will tell you it is amazing how much information can be absorbed from such a telescoped program. Instruction proceeds at a rapid pace, and woe to him who gets lost along the way!

The courses combined the basic theory of refrigeration with practical work in the shop, the latter involving about two thirds of the total training time. Here the various service operations were performed, and the students learned to analyze and correct ailing machines when the instructors hamstrung the systems with all manner of simulated faults.

Not all the men designated to attend the army schools were new to the trade. A great many were former maintenance mechanics of considerable experience. As a rule these men did not take well to the instructions, for to them it was old stuff. They were bored, disliked their new army life anyway, and made no bones about how they felt. They

attended classes in a listless sort of way with an attitude that they knew more than the instructors. And undoubtedly many of them did.

At Melbourne, Australia, there was a refrigeration school for men selected from overseas units. The training here was by Australian civilians, in a technical school atmosphere, and on Australian equipment (a great deal of which is adapted from American designs).

Here there was a definite attitude of the students quite different from that of the men undergoing the same instruction back in the States. This was an excellent opportunity to study Australian methods and equipment. But from the island bases of the Southwest Pacific these men were suddenly lifted and placed in a metropolis of over a million people. Many of the men had spent from 18 to 24 months in the jungles, and their attitude—well they had interests in Melbourne quite apart from refrigeration.

Training Was Beneficial

As already stated, the men without related civilian experience were far from being mechanics when eventually they joined a maintenance outfit. But they had the fundamentals. With this as a point of departure, an interest in the work, and a willingness to apply themselves, they developed into fine mechanics after some field experience. Even the experienced men who took the army training conceded that for the course.

The graduates were then assigned to refrigeration operating companies or to maintenance detachments. Such organizations were likely to have, in addition, former civilian mechanics who had been sent directly from basic training without attending an army school, as well as other men who had no knowledge of refrigeration at all. Time and proper handling eventually integrated these organizations into smoothly functioning units.

It is important to take a look at civilian refrigeration maintenance and its army counterpart as they stand side by side. There are, of course, many parallels, but the differences contrast sharply. The basic maintenance techniques were the same because army equipment was the same as commercial machinery, though tailored sometimes to an army uniform.

Experience Was Broadened

Civilian experience was widened considerably by the necessity of improvising and developing shortcuts when replacement parts were not available. It was also necessary to make extensive repairs on gasoline engines and electric motors, much of

(Concluded on next page)

READY FOR SHIPMENT FROM PEERLESS

ITEMS YOUR CUSTOMERS NEED NOW

ICE CUBE MAKER

EXPANSION VALVE

CAPACITY BOOSTER

FIN COIL

FLASH COOLER

OFF-CENTER COIL

Send your order TODAY - for IMMEDIATE delivery!

PEERLESS Flash Tube Coils, Deluxe Flash Coolers, Capacity Boosters, Ice Cube Makers, Off-center Coils, and Thermal Expansion Valves—all coming off the production line in quantities ready for shipment to you! PEERLESS' superior quality—still further developed

by precision engineering and manufacturing during an outstanding plant war record, insures you the best possible product in the refrigeration field. Buy PEERLESS products—products of known leadership!



PEERLESS OF AMERICA, INC.

Factory, MARION, INDIANA, U. S. A.

EXECUTIVE and GENERAL SALES OFFICES

333 N. MICHIGAN AVENUE, CHICAGO 1, ILLINOIS, U. S. A.

Chicago Gasket Co. welcomes your inquiries. Put our knowledge to a test to solve your problems on gaskets and mechanical molded rubber products.

Please direct your inquiries as follows.

CHICAGO GASKET CO.

5614 W. 63rd. Place

CHICAGO 38, ILLINOIS

About Half of Army's Refrigeration Mechanics Plan To Make Career of it

(Concluded from preceding page)

this latter work being sent out to electric shops by service men back home.

As not an inconsiderable amount of work was with foreign equipment, particularly Australian in this theater, the men had a chance to observe the other fellow's way of doing things.

The foregoing has briefly sketched the training program and subsequent maintenance and repair the army way. Let us see what influence it has had on the future ambitions of the men, those from the industry itself, and those whose first contact with refrigeration was in the army.

Most In Late Twenties

Of those from the industry, the high pressure men were outnumbered by the mechanics who installed and maintained the smaller low pressure commercial jobs and serviced domestic refrigerators. The average age of these latter was about 28. They had been connected with refrigeration for about five years prior to induction. These men displayed the greatest interest in their army work, it seemed, and possessed a vigorous energy in their activities. It is not hard to see, then, why so many plan to return to the same work, often to the same employer, after their discharge from the army. . . . Not only did they work for local distributors but many had their own business already established.

A few cases come to mind of mechanics from nearby communities who worked well together in the army and who intend to form a partnership in civilian life. Some hope to acquire an agency, if possible.

The high pressure men were as a rule older and more experienced in their line. They were in their middle thirties, and their experience averaged well over 10 years. A few took to low pressure work in the army but generally they preferred ice plant operation and maintenance. And to this they plan to return.

What 'Big Machine' Men Plan

Several intend to abandon refrigeration entirely. A typical example

is one who worked in a small ice plant in the Midwest. He has acquired a farm of his own and is going to retire to it entirely because of a part-time layoff each winter due to a reduced domestic trade. Another has a railroad job waiting for him.

The small 15-ton ice plants the army used extensively in this theater were well-liked by the men who operated them. They required a minimum of maintenance and gave excellent service. Not a few mechanics from small towns have expressed a desire to set one of them up in their home town. But the cost of such an installation to them would be prohibitive.

Central cold storage locker installations in rural communities for local farmers have interested others, but again the first cost is beyond their means. It is all very well to say that one has only to secure a financial backer with the capital—but that is easier said than done.

What the 'Newcomers' Plan

And now the men who started their refrigeration career as army mechanics. An estimate that half of these intend to follow the same field after their discharge would not be far from the actual figure. They favor low pressure maintenance. It is interesting to note that their average age is about the same as that of the 28 year old group of former servicemen previously mentioned.

These two groups, having worked together in the army, some of the enthusiasm of the latter has helped to influence the others in their decision to continue in refrigeration as civilians.

Prospective employers of these men should realize that some of the very aspects of army refrigeration maintenance which have so enriched the experience of former civilian mechanics may well prove to be minor stumbling blocks at first to those about to make their first contact with civilian maintenance.

Some Things Must Be Untaught

Improvising and using short-cut methods for lack of parts makes for rough workmanship. And when such

work is necessary to nurse along an ancient, battered machine which should have been scrapped long ago, efficient operation is lost sight of in the struggle just to keep it going. Running a unit with a low charge of gas may work over here when refrigerant is scarce, but such tactics are not for civilian service.

Then, too, these men will learn early that there are definite service policies and customer relationships to be maintained. The important thing of it all, however, is that they have the "know-how." They know their refrigeration, have learned it under the most difficult and adverse conditions. In the light of this, the other shortcomings of their army experience are minor indeed.

Only two of the men the writer has talked with expressed an ambition to study advanced design, with the ultimate aim of becoming refrigeration engineers. A great many of the younger mechanics with a good practical background would make excellent engineers. But they are afraid to tackle college with the added burden of dependents, for most are married.

The educational benefits of the G. I. Bill of Rights are likewise not available to these men because they were over 25 years old when inducted. In such a case it is necessary (as the law stands at present) to prove that one's formal education was interrupted by induction. . . .

From local refrigeration maintenance have come most of the army mechanics. They are a young, enthusiastic group, have done a fine job for the army. And now they want to return to their prewar jobs. They will bring with them some converted high pressure maintenance men, together with a considerable

number of mechanics their own age who first learned refrigeration in the army.

There is a spirit of independence in running one's own maintenance shop, of aspiring to eventually acquire a distributing agency for electrical appliances and refrigerators. The G. I. Bill of Rights is pledged to aid these men in this respect. Mechanics with a sound technical knowledge of refrigeration installation and repair will have to possess just as good a head for business principles if they intend to become their own boss. But their extensive army work in refrigeration has broadened their experience in many ways. They have gained a greater confidence in their own abilities, and those who want to do so are thus better prepared for bigger things.

New Firm In Aberdeen, N.C.

ABERDEEN, N. C.—Cecil Robinson announced that he will enter the appliance business with the Sandhill Appliance Co. here. The firm was recently organized by C. J. Simons, J. A. Smith, and George Hudson.

ROME-CONDENSER ★ Jointless Type ★



Rome Water Cooled Condenser Coils insure trouble-free condensing equipment. Used by leading compressor manufacturers.

ROME-TURNEY RADIATOR COMPANY

222 CANAL ST.
ROME, N. Y.

Member of the National Refrigeration Supply Jobbers Association

Your refrigeration parts and supply
house in Central New York and
Northern Pennsylvania

TED GLOU

CENTRAL SERVICE SUPPLY CO.

516-18-20 E. Erie Blvd., Syracuse, N. Y.
209-211 Jefferson Ave., Scranton, Pa.

Phone 5-4000
Phone 3-4000

99.5% PURE .. DRY .. UNIFORM ..

DU PONT

Artic

METHYL CHLORIDE

for your refrigeration

HIGH-PURITY Du Pont Methyl Chloride meets your every requirement.

ORDER AS YOU NEED IT, but don't stock up!

RETURN EMPTIES PROMPTLY—Your co-

operation in returning empty cylinders will help speed deliveries to you and others. E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Department, Wilmington 98, Delaware.

KEEP ON BUYING VICTORY BONDS!

DU PONT METHYL CHLORIDE SPECIFICATIONS

Purity 99.5% Methyl Chloride
Moisture 0.008% by wgt. max.
Acid as (HCl) 0.001% by wgt. max.
Residue on Evaporation . . . 0.01% by wgt. max.
Boiling Range (760mm) . . . —24.6° to —23.6°C.
Color water white, clear

DU PONT ELECTROCHEMICALS



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

**Refrigeration
AND AIR CONDITIONING**

YOU will find NIBCO WROT Fittings, return bends and tubular parts mighty useful in laying out air conditioning or refrigeration equipment. In many cases, instead of having to buy a special part, you will find what you need in our standard line...tees, elbows, couplings, reducers, adapters, crosses, return bends, hangers...more than one thousand items and sizes are listed in Catalog 613. If you do not have a copy, write for it today.

NIBCO WROT
Northern Indiana Brass Co.
ELKHART, INDIANA
VALVES AND FITTINGS SINCE 1904

They'll Do It Every Time By Jimmy Hatlo



Buy and Buy - - More War Bonds

MAKE SURE YOUR COOLING COILS
ARE NOT 1000 YEARS BEHIND TIMES



In 2225 B. C. the Babylonians made the first recorded water pipes by rolling lead sheets into crude tubes. Modern pipe still serves the same purpose well—but for heat transfer it is almost as primitive as the Babylonian contraptions.

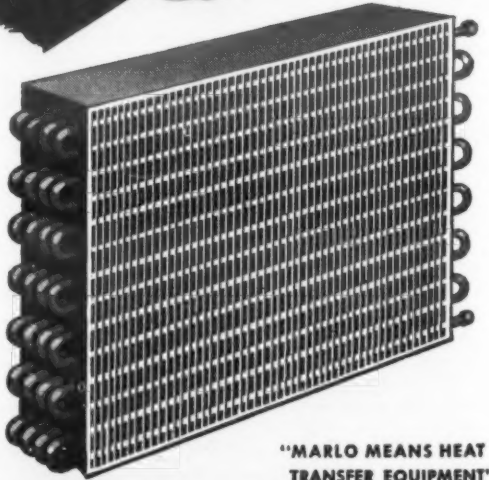
Efficient heat transfer requires **EXTENDED** coil surface—**FINS!** It will pay you to replace bare cooling pipes with modern MARLO Fin Coils for:

- Greater efficiency • Smaller size
- Lighter weight • Lower cost

May we send you our Blast Coil Bulletin?

MARLO HEAT TRANSFER SURFACE

Ball-Bonded Blast Coils—Cooling and Heating • Air Conditioning and Refrigeration Apparatus • Industrial Blower Units • Unit Coolers • Evaporative Condensers and Coolers • Low Temperature Apparatus.



"MARLO MEANS HEAT TRANSFER EQUIPMENT"

MARLO COIL COMPANY

ST. LOUIS 10, MISSOURI

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark registered U. S. Patent Office: Est. 1926

AIR CONDITIONING AND REFRIGERATION News

BUSINESS NEWS PUBLISHING COMPANY • 5229 CASS AVENUE, DETROIT 2, MICHIGAN

F. M. COCKRELL, Founder

Published Every Monday by BUSINESS NEWS PUBLISHING CO.
5229 Cass Ave., Detroit 2, Mich. Telephone Columbia 4242.

Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: \$4.00 per year; 2 years for \$7.00. All other foreign countries: \$6.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Send remittance with order.

GEORGE F. TAUBENECK
Editor and Publisher

PHIL B. REDEKER, Managing Editor

C. DALE MERICLE, Assistant Editor
ROSS H. POTTER, Assistant Editor
Editorial Assistants: BARBARA LEE, MARCELLA PRICE, FRANCES WEED, AND LORRAINE McNINCH.

ELIZABETH SMITH, Assistant Bus. Mgr.
MACIL STEPHENS, Asst. Adv. Mgr.
HELEN C. HENDERSON, Credit Manager
RUTH RICHARDSON, Subscription Mgr.

On leave of absence to serve our country:
U. S. Army: JACK SWEET, GEORGE L. COLLINS, GEORGE M. HANNING, AND HUGH T. MAHAR. U. S. Navy: ROBERT P. NIXON, ED HENDERSON, JOHN R. ADAMS, AND ANDREW GANTT. U. S. Marine Corps: PAUL R. PARK. U. S. Army Air Forces: JIM McCALLUM, GEORGE WATKINS, AND WILLIAM WALTER. U. S. Coast Guard: MERTON GLUTTING. Waves: MARGARET MARR AND LYNDON JANE BRODE.

Member, Audit Bureau of Circulations. Member, Associated Business Papers.

VOLUME 46, No. 10, SERIAL No. 868, NOVEMBER 5, 1945

Big Fish Swallow Smaller Fish, And So On Ad Infinitum

If you can remember 'way back to childhood days, you may recall a hoary old bit of doggerel which goes:

Big fleas suffer little fleas
Upon their backs to bite 'em;
Little fleas have smaller fleas,
And so on ad infinitum.

In a fashion, this describes competition. So long as free competition is allowed to survive in the world, the biggest outfits will be annoyed by lesser rivals, and the "lessers" by smaller competitors—all the way down the scale.

Periodically the big animals get fed up with all this, and either buy out or knock out their annoying "parasites."

Then the cycle starts up again.

This is the essence of the Free Enterprise System.

It opens the door to progress.

As a system, it's healthy, lively, exuberant, and ever-advancing.

Currently, however, we are witnessing an odd variation in this cycle. Hardly know what to name it, or how to classify it, yet.

It's a phenomenon born of World War II.

Formerly we thought of mergers and "combines" as being the result of the natural urge toward monopoly.

These new "swallowings of the independents" which are taking place in the refrigeration industry today are taking place as the end-product of the *opposite* urge: the desire to compete.

War-born manufacturing organizations, realizing that they would be left high-and-dry with cessation of orders for lethal weapons, have been casting about for an outlet for their energies, their equipment, their capital, and their will-to-live.

One peace-time business whose long-range possibilities have attracted a God's plenty of them—and understandably so—is air conditioning and refrigeration.

So, with a flourish and a waving of pennants they have announced to their employees and their stockholders that they were going to bring out a home freezer, a household refrigerator, or an air conditioner.

But, whoa!

After they got to looking further into the situation, they encountered some seemingly insurmountable obstacles. You don't just grind out a refrigeration product, they learned, without first learning a great many things which can't be found in government supplied specifications.

It takes "know-how" and experience.

So what happens? They are *buying* their way into the business.

Owners of small, "independent" refrigeration product manufacturers—realizing that, under today's tax laws, the only real money is equity money—are selling out to eager, sometimes desperate, management groups which have enormous capital at their disposal.

You can't blame them. Taxes have them licked—they can't make any money from their salaries, nor from dividends. Labor troubles, government regulation troubles, social change troubles—all leave them feeling: "what's the use?"

So they sell out: paying their modest 25% capital gains tax.

Because the "little fellow" in the manufacturing business seems to be impaled "for keeps" on the horns of a devastating dilemma, the "big fish" are swallowing the "smaller fish" with unbelievable ease today.

This bodes no good for the Free Enterprise System—which is based upon competition.

But it is a current fact, so we must record it.



How an Expansion Valve Saves Valuable Sulphur Dioxide (SO₂) in Casting "DOWMETAL"...

UNIQUE APPLICATION DEMONSTRATES VERSATILITY OF  CONTROLS

Preventing Waste of war-scarce Sulphur Dioxide (SO₂) was one of the many remarkable jobs performed with the aid of an "A-P" DEPENDABLE Expansion Valve. The story is reported by Mr. W. Fred Campbell, refrigeration engineer for the Dowmetal Division of the Dow Chemical Co., Bay City, Michigan.

In casting "Dowmetal", in which magnesium is used, it is essential to drive the oxygen from the mold in order to prevent the magnesium from burning. For this purpose, a commercial, non-refrigerant grade of Sulphur Dioxide is used.

Dowmetal Foundry, explains Mr. Campbell, puts a tank of Sulphur Dioxide on a scale, then mounts an "A-P" Expansion Valve No. 204 to reduce the pressure to 15 pounds. As a result, sulphur is saved that would have otherwise been wasted in transferring to a smaller drum. This method also prevents putting a larger amount of sulphur in the casting mold than is actually needed. Out-of-ordinary services like this, performed so efficiently by a standard "A-P" Expansion Valve, show how flexible as well as dependable "A-P" Controls really are. They explain why experienced refrigeration and air conditioning engineers look to "A-P" for the successful solution on any control problem they may encounter.



MR. FRED W. CAMPBELL, Refrigeration Engineer
Dowmetal Division, Dow Chemical Company

AUTOMATIC PRODUCTS COMPANY

2450 North 32nd Street • Milwaukee 10, Wisconsin
EXPORT DEPT., 13 E. 40th Street, New York 16, N. Y.



This is the "A-P" Model No. 204 Expansion Valve that saves valuable sulphur in casting "Dowmetal". Freon Capacity — ¼ Ton.



DEPENDABLE Refrigerant Valves

STOCKED AND SOLD BY GOOD REFRIGERATION JOBBERS EVERYWHERE • RECOMMENDED AND INSTALLED BY LEADING REFRIGERATION SERVICE ENGINEERS

Off the Chest

HOUSING SHORTAGE STUMPS REPAIRMAN

P. O. Box 16
Griffin, Ark.

Editor:

Have been a subscriber to your interesting and valuable magazine for some time and consider it a valuable asset to anyone in the game—don't see how I could get along without it.

I write this because I, like many others, am in more or less of a post-war jam and wonder if you can help me in any way, for which I will be very grateful and willing to pay you for any services rendered.

I have followed defense construction work for three years now, gave up a good little shop and service business to do so, as I figured at that time I could be of more benefit to the country.

Now the war is over and I want to

start back in business for myself, and after looking over about two dozen towns, large and small, I find there are plenty of openings for a refrigeration and electrical shop in almost any town of any size, but there seems to be no empty houses in any town, regardless of size.

So I have been wondering if you ever hear from towns who are in need of a service shop and who have living quarters for a man's wife and five children.

I've had eight years experience with practically all makes of domestics and commercials of all sizes, doing installation, service, and repair work, am a licensed electrician in house wiring and all types of commercial wiring, do repair work on anything but radios and armature rewinding.

Can furnish best of character and credit references.

If you can put me in touch with a

town wanting services of such a man, I will appreciate it very much, or if you think an advertisement in your magazine would locate a place, I will place one.

Thanking you in advance for any help you can give, I am

R. W. HARRISON

WHO'S THE 'JERK' WITH SUCH TEMERITY?

Jersey Central Appliance Co.
701 Main St.
Asbury Park, N. J.

Editor:

I want to make sure that my copies of REFRIGERATION NEWS keep coming, also, the one I missed this week, so will you please give this your immediate attention. I promise that I will take care of the "jerk" who had the temerity to cancel the subscription without advising me.

C. R. BUTCHER,
Vice President

ARMY OFFICERS ANXIOUS TO LEARN REFRIGERATION

3116 Jones St.
Sioux City, Iowa

Editor:

As I have been a subscriber and reader of REFRIGERATION NEWS for several years, I am taking the liberty of writing to you for information which I presume you are in a position to give me.

I have a son-in-law and also a nephew, both commissioned officers in the U. S. Army, who desire to learn the air conditioning and commercial refrigeration business as soon as possible after release from the army. They are both married and have

family responsibilities, therefore, conditions require that they have some income while getting a start.

I am of the opinion that some of the leaders in the air conditioning industry have apprentice schools or some method of that sort whereby young men can earn while learning.

If you know of such arrangements or plans on the part of any of the responsible concerns that are leaders in the industry, I would appreciate very much if you would advise me who to write to and any other information along this line that you may be in a position to give.

As a member of the former distributing firm of Malone & Moles, of Sioux City, have had several years of first hand experience myself in the air conditioning and refrigeration field, but am out of that since the beginning of the war and am not in touch with any of the officials of the companies that manufacture refrigeration and air conditioning equipment.

EARL B. MOLES

HOW MANY UNITS CAN ONE MAN SERVICE?

29 South Rodney Drive
Edge Moor Gardens
Wilmington 261, Del.

Editor:

Do you have any data that will show how many compressors the average service man can take care of efficiently in the ice cream industry?

If a service man is given a truck and all the parts he needs, how many compressors could he take care of within a 35-mile radius of his terminal, working a six-day week? He would handle service only. Any changes in equipment and installations of equipment would be handled by another crew.

I want to thank you for any information you may be able to give me.

ARTHUR WALLS, JR.

Answer: Your question on how many compressors the average refrigeration service man can take care of if he works in the ice cream field only is one that is almost impossible to answer with any accuracy.

During the War the Refrigeration Service Managers Group of the Electric Association of Philadelphia made some studies which showed that the average time spent on each service call was a little over two hours. We are not sure whether or not this included travel time. On that basis the service man could make five calls a day, unless some of them were mere inspection calls, in which case he could probably make quite a few more.

'I AGREE WITH THE EDITORIAL'

Farmers Union Central
Exchange, Inc.
P. O. Box "G"
St. Paul 1, Minn.

Editor:

I have had an opportunity to read your editorial, "The Income Tax Bogey," which appeared in a recent issue of AIR CONDITIONING & REFRIGERATION NEWS.

I wish to compliment you on your courage in writing the editorial and the thoroughness with which you have covered the subject.

Obviously I agree with the editorial.

E. A. SYFTSTAD,
General Manager

'SMART PUBLICATION'

Halle's Majestic Electric Co.
119-121 N. Nevada Ave.
Colorado Springs, Col.

Editor:

I want to tell you how much we enjoy your smart publication.

SIMON HALLE

CURSING THE DARKNESS IS NOT THE WAY

Benjamin Franklin Research Society
511 Gravier St.
New Orleans, La.

Editor:

I have kept before me some of your very fine editorials lambasting the bureaucrats, etc. as a reminder to send a copy of the enclosed "Re-Employment and Business Expansion" proposal—when off the press.

Needless to say, I entirely agree with everything you say as to the present trend towards a regimented and welfare state, however, as indicated in the enclosed form letter to chambers of commerce, we feel that the "cursing the darkness" methods used in combatting this trend have not been fundamental—in the degree required to save our great American Institutions and Way of Life from annihilation.

What is needed is a getting-together of great organizations such as the U. S. Chamber of Commerce, National Association of Manufacturers, N.E.M.A. and others in making a thorough study of, not only the inflationary matters brought out in this proposal, but the other side of the picture—the tremendous vista of new and beckoning opportunity which awaits us if we "get our economics on straight."

Recent happenings in England would seem to indicate that there is no time to lose—if we are to counteract the National Socialist (European) trend in banking, insurance, heavy industry, electric power, etc.

W. E. CLEMENT



Dairies Everywhere

Like **FRICK** Refrigeration



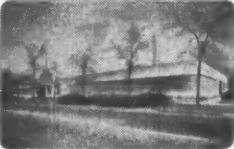
Sheffield Farms, New York



Chestnut Farms, Washington



Superior Dairies, St. Augustine



Central Ice Cream, Chicago



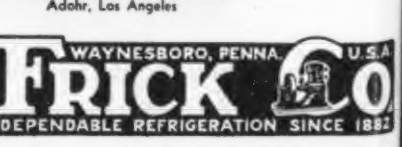
Carnation Milk, Tulsa



Lone Star, Houston



Adohr, Los Angeles



Wayneboro, Penna.

Because it sets the standards of dependability, convenience, and overall economy. Whether for cooling milk, freezing ice cream, keeping storage rooms cold, refrigerating trucks, making ice, or conditioning air, you'll find Frick equipment the choice of leading dairies throughout the country. Let us quote on YOUR cooling needs: write, wire or phone

The PIONEER
FLUID DEHYDRANT
THAWZONE
Fully Protected by U. S. Patents
HIGHSIDE
CHEMICALS CO.
195 VERONA AVE.
NEWARK 4, N. J.

HASCOBILT
Packed in Special
Cardboard Boxes or Containers
Part No. 7-9
Offers
(1) Complete inventory record.
(2) Part numbers always visible.
(3) Easily stored in bins or on shelves.
for Conventional and
Hermetic Type Compressors
HASCO, INC.
GREENSBORO, N. C.
Write for illustrated catalog and price list.

SPECIALLY PROCESSED FOR REFRIGERATION USE

STERLING REFRIGO GEL

INERT

No chemical reaction. Harmless to metals, alloys.

UNIFORM

Retains its carefully controlled particle size.

DUSTLESS

No clogging of screens.

TESTED

Designed, processed and tested for refrigerant dehydration.

DOUBLE DUTY

Absorbs moisture; prevents corrosion.

UNIVERSAL

Effective with all types of refrigerants.

A SUPERIOR SILICA GEL PRODUCT for Factory-Charged Dehydrators or Bulk Refills

• Here is the ideal drying agent for use in refrigerator plugs. It has been carefully processed from superior quality Silica Gel to meet the exacting requirements of the refrigerating industry. Acts instantly to adsorb moisture. Maintains its uniform crystal size without powdering or caking thus preventing the refrigerant from channeling. Noted for

its long-term dependability and uniformity. Inquiries invited from distributors and jobbers.

STERLING SILICA GEL CO.
STERLING ILLINOIS

Off the Chest

OREGON SUBSCRIBER LOOKING FOR SCHOOL

Route 1, Box 209
Vale, Ore.

Editor:

I have been subscribing to your publication for the past two years and I find the NEWS very interesting as well as educational.

This winter I would like to attend a trade school in Chicago to study refrigeration. Would it be possible to get a list of trade schools specializing in refrigeration and air conditioning in Chicago?

Since your publication specializes in refrigeration news, I believe your organization would be the most logical to have the information which I am seeking. I trust that this will not be too much bother for you. But I am quite anxious to get the list of the various trade schools so that I may pick the proper one to attend. I would appreciate any help you can give me in regards to this matter.

I thank you.

Sincerely yours,
CHARLES M. FURUTA

PATRICK HENRY AND SITUATION IN CEYLON

Gothatuwa, Angoda
(Ceylon) India

Editor:

Before attempting to predict postwar prospects, may I quote Patrick Henry: "I know of no way of judging the future but by the past."

Postwar prospects for refrigeration, air conditioning, and home appliances are good in Ceylon, not without, of course, the usual flood of amateurs. The firms in Ceylon dealing with this branch of engineering will concentrate on refrigeration and air conditioning—home appliances playing a minor role.

As for what I intend doing, home appliances will have its separate sales and service department in the air conditioning and refrigeration sales and service establishments that I have decided to float.

C. WILFORD ROWLANDS,
Refrigeration Engineer

FOREIGN TRADE EYED BY DELHI CHAMBER

537 Egerton Road
Delhi, India

Editor:

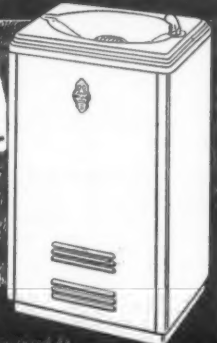
The American Consul General in India, on our request for putting us in contact with the various Chambers of Commerce in America and with the selected publishing houses for commercial and industrial literature, has kindly favored us with your name for your weekly journal AIR CONDITIONING & REFRIGERATION NEWS. We shall be much obliged if

The Newest and Finest
ELECTRIC
WaterCoolers

ALL SIZES,
INDUSTRIAL
AND
COMMERCIAL

EXCLUSIVE
DEALER FRANCHISE

THE REVELATION CO.
L. E. RABJOHN
2801 San Fernando Rd. Los Angeles 41, Calif.



you will place our name on your mailing list and would also favor us with your advertisement rates.

This association exists for promoting the business interests of its member business-houses and helps them to obtain world-wide business information and also in establishing business connections with the foreign manufacturers and shippers.

We maintain a good library for the general use of the commercial public and we therefore welcome all kinds of industrial and commercial literature from every part of the globe and would like to have your cooperation and suggestions in this respect.

We would also wish you to publish a small notice in your paper to the effect that this Chamber will help the American manufacturers and shippers to establish business connections in India.

K. C. JAIN SATYAVADI,
Delhi Chamber of Commerce

INDIAN FIRM WANTS A U. S. LICENSE

Satara
(Bombay Presidency, India)

Editor:

We are manufacturers of new air conditioning room cooling plant and equipment in this country for sale and will be very grateful to you if you will kindly introduce to us names of some of the manufacturers of such plants on your side who will be willing to get an entire plant of their make, made by us, in India, under a license, granted to us on payment of an agreed royalty per unit.

We propose to build the plant ourselves with material available in India, and the other component parts as cannot be made in India we shall import from the original designer on payment of certain royalty per each unit so produced by us.

In order that an early settlement may be arrived at we would request you further to ask the firms selected by you for the purpose to write to us and on receipt of such negotiations we shall be pleased to write to them and introduce business connections in due course.

Any literature you will be pleased to supply will be very gratefully received and paid for.

SIR DHANJISHAH B. COOPER, KT.,
Director, Cooper Engineering, Ltd.

FROM BRAZIL

Caiza Postal, 796
Bahia, Brazil, S. A.

Editor:

Please do not lapse my subscription, as it fills a gap that other papers do not.

JAMES H. HILL

WHO WANTS RIGHTS ON BOTTLE COOLER?

810 E. North Ave.
Baltimore 2, Md.

Editor:

Enclosed please find a patent I have on a dry bottle cooler.

Will you please help me contact the proper parties that would manufacture this cooler, on a reasonable plan?

I have had 12 years experience in the manufacture and sale of commercial refrigerators. I have another patent pending on an improvement of air circulation in a meat display case.

I would like to make connections with some company to manufacture this bottle cooler. I will appreciate any help or any suggestions from you.

DENNIS C. BINY

SEND THE BULLETIN TO MEN OVERSEAS

389th F. A. Bn.
A.P.O. #445
Fort Bragg, N. C.

Editor:

Enclosed herewith is a check in the amount of \$4 for a year's subscription to AIR CONDITIONING & REFRIGERATION NEWS.

I trust that this sort of a "renewal of subscription" can be made. I was both a reader and subscriber from 1934 to 1941 when I entered the service and was previously employed by the Detroit Lubricator Co.

I don't know if you have made any publicity of this idea, but could I suggest that you encourage your subscribers to put the Bulletin issue in the mail for someone overseas when they are finished with it?

Scanning this condensed form on news from home was a welcome relief when a friend obliged my request when I was overseas.

The organization is now back in the U. S. on a redeployment program.
CAPT. W. H. KRACK

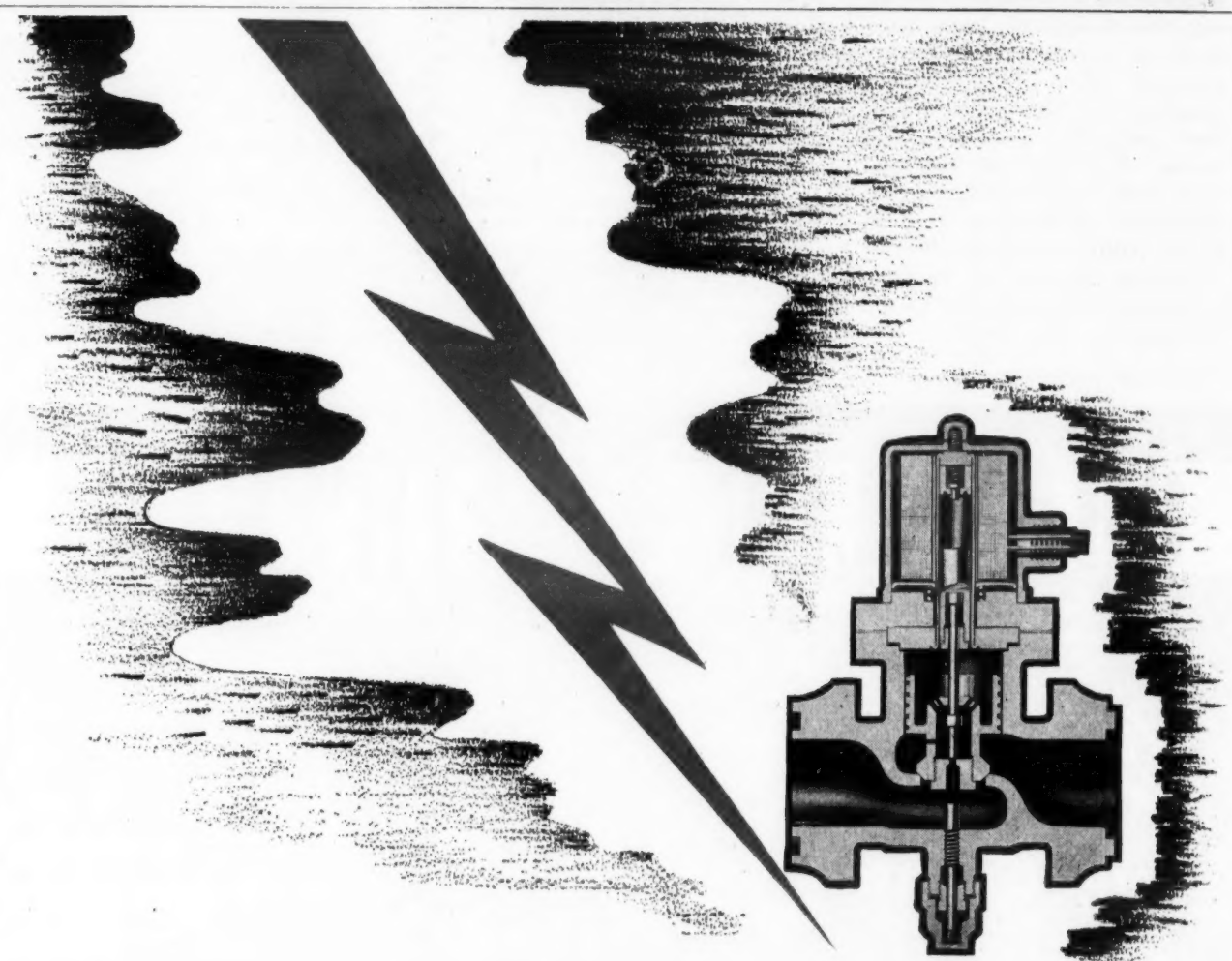


Representatives in principal cities. See your telephone book.

Freon Condensers • Dry-Ex Water Coolers •
Evaporative Condensers • Forced Convection
Units • Oil Separators • Liquid Receivers • Heat
Exchangers • Pipe Coils • Hi-Peak Water Coolers
Flooded Water Coolers • Ammonia Condensers.

Write for catalog on any item

ACME INDUSTRIES
Jackson, Michigan



ALCO SOLENOID VALVES AUTOMATICALLY RESPOND WITH LIGHTNING SPEED

They are electrically actuated by the temperature of the medium to be cooled and respond instantly. Therefore, Alco Solenoid Valves provide split-second flow control of refrigerants.

They are dependable under the most adverse conditions: heat, cold, moisture or fluctuating current. For complete data, send for our Solenoid Bulletin.



ALCO SOLENOID VALVES

ALCO VALVE CO.

853 KINGSLAND AVE. • ST. LOUIS 5, MO.

Designers and Manufacturers
of Thermostatic Expansion
Valves; Pressure Regulating
Valves; Solenoid Valves;
Float Valves; Float Switches.

HOWELL MOTORS

ELECTRIC MOTORS FOR INDUSTRY SINCE 1915

HOWELL ELECTRIC MOTORS COMPANY • HOWELL, MICH. • REPRESENTATIVES IN ALL PRINCIPAL CITIES

WAR INDUSTRIES NEED REFRIGERATION

The use of refrigeration in industry has been greatly accelerated by the war. In peacetime this expansion may logically be expected to continue. Write for literature.

GENERAL REFRIGERATION DIVISION



Refrigeration Engineer

At least five years application engineering experience, including the design of large commercial storage and freezing systems. Must be thoroughly familiar with load calculations, cost estimates, and the most recent developments in food and industrial refrigeration processes, techniques and equipment. Address reply to—Walter A. Grant, Director of Application Engineering, Carrier Corp., Syracuse 1, New York.

'It's Swell' Say Riders Of Air Cooled Trolley

More Than 90% Voice Approval, With the Usual Number of Suggested 'Improvements'

ATLANTA—Ninety-three and two tenths of those citizens here who were treated to their first air conditioned trackless trolley ride by the Georgia Power Co. avowed that their comfort was greatly increased, and 5.9% were more conservative in their replies by saying there was but a slight improvement, according to the power company survey.

The trolley operated from Aug. 19 through Sept. 6, and all passengers were asked to pass judgment by filling in a short questionnaire afterwards.

Riders were quizzed as to the degree to which their comfort was improved, if they would ride more often provided such vehicles were installed throughout the city, if they could suggest further improvement, and whether or not they had the use of an automobile for part or all of their transportation.

Replies turned in were many, and additional comments appearing on the back of the forms covered everything from gripes about the person's breath in the aft seat to praise of the lovely hostess who was aboard to pass out the questionnaires.

Of the cards received, 455 were enthusiastic in their approval with statements ranging from "It's OK," "Wonderful," "Swell," to "Tremendous improvement and a forward step

for Atlanta."

"So cool, so calm, so refreshing, so free and easy on the . . . seat!"

"Now you're cooking on the front burner."

"I shall never walk again!"

"It will help keep your meat fresh en route home from the grocery store."

Other affirmative comments were: "It helps me keep awake when I return from a date in the early morning."

"It is fine just the way it is. I have rode the others so much that this seems like a swell dream. I sure hope I don't wake up to find that it was only a dream!"

"All that's wrong is that we need more of them."

"This is one of my postwar dreams come true."

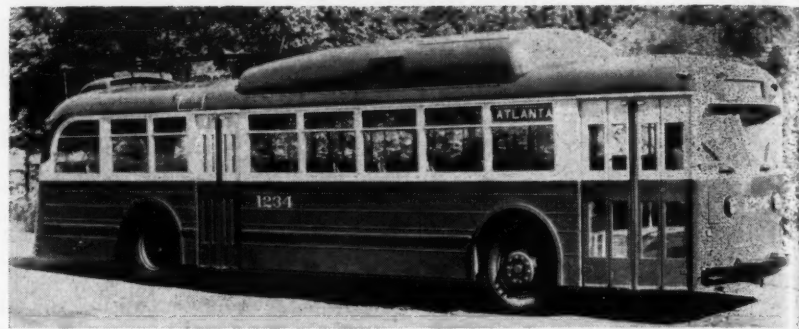
"It enables you to stand up and enjoy it. You are ready for work when arriving downtown more so than if you were hot and tired."

"A refreshing rather than fatiguing ride."

"I think it's wonderful! But I'm prejudiced." (Mr. Fenn of Carrier.)

"Many voiced their opinion concerning the specific advantages or disadvantages of the air conditioning. Forty-seven women pointed out that their hair would not be blown out of place."

World's First Air Conditioned Trolley Car



Georgia Power Co.'s air conditioned trackless trolley, which has received trial runs in Atlanta. The Carrier system provides year-around air conditioning. The cooling surface is installed in the roof, and the refrigeration machine in the floor of the car, which was made in the Worcester, Mass., plant of the Pullman Co.

"I've always wanted to ride without having my hair blown upside down. Now my dreams have come true."

"This new air conditioning will let us standees breathe, since previously the gals wouldn't risk their hair-dos for our comfort. One and all we thank you."

"I am very thankful for the air conditioned trolley. My hair doesn't blow wild and it's really a joy."

Altogether, 24 passengers mentioned the improvement for standees, who will no longer suffocate because of close-the-window cranks.

Five replies stated that the trolley should be warmer, and 15 wanted the temperature lowered still more.

"Will prevent disease," said six riders; while five said the air conditioned trolley with its closed windows would spread disease, according to survey figures.

The topic of odors was commented upon by 17 people, 12 of whom said that dirt and fumes and odors were eliminated, and five declaring that the odors were still in evidence, plus a new objectionable odor—that from air conditioning!

Hot feet was the complaint of two passengers, who pleaded: "Put more air on the floor to keep our feet cooler."

One practical rider was busily looking out for the Georgia Power Co. as she said: "I cannot see where they are practical when the doors have to be opened so often. On a long trip, yes; on a short trip, no."

Subject of higher bus fare occupied the minds of quite a few riders. Some of them OK'd a slight increase, and others were opposed.

"Can't see how you can get your money back for what these busses cost unless you raise the fare, which I would not like."

"This ride is worth more. It's much better. We are not bothered with hot air coming in windows. Really, this kind of transportation is worth more."

"If you are going to go up on the fare to install them, just leave them as they are."

"In my opinion I think the air conditioned trolley would be very good as long-line express specials with a special raise in fare."

Comments showing customers' preference for new trolleys to cars of their own cropped up now and then.

"Please put on all air conditioned buses, and I will not buy a car."

"If I could ride like this all the time, I would feel like selling my car."

"Taking the trolley instead of my car is faster—no waiting at the parking lot—no bent fenders."

Courteousness of the trolley driver was accredited to the air conditioned state-of-affairs, also.

"Due to the air conditioning, the operator of this vehicle is very courteous."

"This is the finest car I have ridden in. It beats air conditioned streamliners. I noticed the driver is very courteous and most pleasant. It's really a great ride."

Truly derogatory remarks were few and far between, most of the criticism being partly constructive and helpful. Those who bluntly stated dislikes wrote, as follows:

"It is not comfortable, the air gets in my nose; the air is a little too high or deep . . . you know what I mean."

"So much comfort will make the buses far too crowded."

The Georgia Power Co. survey also disclosed customers' suggestions for improvement of the air conditioned trolley. Some recommendations were a bit facetious, while others, company officials say, were constructive criticisms which can be corrected in future buses, such as the reduction of noise and vibration, installation of heat resisting glass, and proper adjustment of equipment to prevent too sharp a contrast with outside temperature.

Summary of Riders' Replies To Questionnaire

	Sept. 6	Aug. 19-Sept. 6
1. It improves comfort,		
Greatly	93.2	94.4
A little	5.9	4.8
None	0.9	0.8
2. If all trolleys were air conditioned, I would ride,		
More often	48.2	57.4
Same as now	51.8	42.6
3. This air conditioned trolley is comfortable,		
The way it is	83.8	80.8
It would be more comfortable if it were,		
Cooler	11.9	16.6
Warmer	4.3	2.6

MAN WANTED

We require an outstanding sales engineer with the following qualifications:

Age 32-38.

Thorough knowledge of commercial refrigeration.

Intimate acquaintance with refrigeration jobbers and manufacturers Midwest.

Capable of formulating sales policies.

Record of reliability, integrity and successful sales results.

We are located in the Midwest, manufacturing low side equipment and selling to the leading manufacturers and jobbers in the United States. Position is permanent, and remuneration will be in excess of \$7500 annually.

Kindly submit complete history, together with recent photograph. Box No. 1843, Air Conditioning & Refrigeration News.

CHRYSLER AIRTEMP

Chrysler Airtemp

DEALER AGREEMENT

Your Most Valuable Asset

Now that the war is over, every heating dealer must get set for high volume sales. The Chrysler Airtemp line of heating, cooling and refrigeration is a natural leader. Products, prestige and prices combined with the Chrysler background of engineering, provide a dealer agreement that can be your most valuable asset.

The Chrysler Airtemp Triple Line . . .

Heating, Cooling, and Commercial Refrigeration . . . offers dealers an unusual opportunity for 12 months' profitable operation. Dealer agreements will be available for any single Chrysler Airtemp Line . . . any two lines . . . or for all three lines. • Airtemp Division, Chrysler Corporation, Dayton 1, Ohio. In Canada, Therm-O-Rite Products, Limited. • Toronto, Ontario.



THE 4 FUNDAMENTALS
of CHRYSLER AIRTEMP
DEALER OPERATIONS

1. Engineered Installation
2. Proper Display
3. Outside Selling
4. Customer Service



Invest in Your Future—Buy Victory Bonds—"NEW THURSDAY NIGHT PROGRAM! The Music of Andre Kostelanetz with the most popular stars of the musical world, Thursdays, C.B.S., 9 P.M., E.S.T."

HEATING • COOLING • REFRIGERATION

11 Firms Assigned OPA Ceiling Prices For Freezers & Commercial Refrigerators

Thomas Bentley

Sanitary Refrigerator

American Thermal

Gamble Mfg. Co.

Stoddard Mfg. Co.

WASHINGTON, D. C.—Authorization of maximum prices for farm and home freezers manufactured by five midwest firms has been made by OPA recently under MPR 591.

The firms are: Thomas H. Bentley Co., 1025 N. Third St., Milwaukee; Sanitary Refrigerator Co., Fond du Lac, Wis.; American Thermal Industries, Inc., Detroit; Gamble Mfg. Co., 1114 S. Noland, Independence, Mo.; and Stoddard Mfg. Co., 617 Fourth St., S.W., Mason City, Iowa.

Order 52, effective Oct. 19, schedules prices for three models of food freezers manufactured by the Thomas H. Bentley Co., as follows:

Model	To Distributors	To Dealers	To Consumers
Model FH18, 18 cu. ft., 1/2 hp. compressor	\$275	\$330	\$550
Model FS18, 18 cu. ft., 1/2 hp. compressor	260	312	520
Model FS18, 18 cu. ft., less compressor and plates	180	216	360

Farm freezer Model No. 1245 (12 1/2 cu. ft., 1/2 hp. condensing unit), produced by Sanitary Refrigerator Co., sells at the following rates, established by Order 58, effective Oct. 20: to distributors, \$212.50; to dealers, \$255; to consumers, \$425.

Sales to distributors of Model HF-61 (1/2-hp. condensing unit), home freezer manufactured by American Thermal Industries, Inc., are governed by a ceiling price of \$140. To dealers, the high figure is \$168; to consumers, \$280. Effective Oct. 20, these prices are included in Order 60.

Gamble Mfg. Co.'s farm and home sharp locker freezer has a top rate of \$230 to distributors, \$276 to dealers, and \$460 to consumers under Order 61, effective Oct. 20.

Model 5B (5 cu. ft., 1/2-hp. condensing unit), a home freezer turned out by Stoddard Mfg. Co., may be sold at a ceiling price of \$150 to distributors, \$180 to dealers, and \$300 to consumers by Order 62, with Oct. 20 as the effective date.

These maximum net prices may be increased to each class of purchaser by \$6 to cover cost of crating when actually supplied, according to the order. The order also stipulates that these prices shall be subject to discounts, allowances, and rendition of services comparable to those of March, 1942.

On sales by a distributor or dealer, the order permits addition of the following charges: actual amount of freight paid for delivery, not exceeding the lowest common carrier rates, and crating expenses actually paid to the supplier but not more than \$6.

All prices are f.o.b. point of shipment.

King Kold Mfg. Co.

PHILADELPHIA—King Kold Mfg. Co. has received OPA's decision on ceiling prices for 10 types of its refrigeration equipment. Order 56, MPR 591, effective Oct. 19, sets the following maximum net prices, f.o.b. point of shipment:

Model	To Distributors	To Dealers	To Consumers
6' x 6' x 8' *	\$275.62	\$330.74	\$551.24
6' x 8' x 8' *	334.08	400.00	668.16
8' x 8' x 8' *	400.90	481.08	801.80
8' x 10' x 8' *	467.71	561.25	935.42
12-6 D. D.			
6' x 42" †	347.50	417.00	695.00
10-8 D. D.			
8' x 50" †	487.50	585.00	975.00
W. C. 6 D. D.			
8' x 74" †	460.00	552.00	920.00
W. C. 8 D. D.			
8' x 74" †	585.00	702.00	1,170.00
40-6 ‡	310.00	372.00	620.00
40-8 ‡	350.00	420.00	700.00

* Walk-in storage refrigerator (wood or steel clad.)

† Display case.

‡ All-purpose refrigerator.

The order allows addition of \$6 for crating. Distributors and dealers may add the actual freight charge to their place of business, at not more than the lowest common carrier rates, and crating charges actually paid to suppliers, not exceeding \$6.

Discounts, allowances, and services are to be based on March, 1942, levels.

Loudon Mfg. Co.

MINNEAPOLIS—Ceiling prices for four models of walk-in coolers produced by the Loudon Mfg. Co., 3610 Lyndale Ave. South, have been published by OPA in Order 59, MPR 591, effective Oct. 20. The prices are:

Model	To Distributors	To Dealers	To Consumers
Walk-In HF 68-68 cu. ft.	\$600	\$700	\$1,000
Freezers HF 64-10 cu. ft., 1/2 hp.	190	288	380
HF 78-16 cu. ft., 1/2 hp.	270	324	540
HF 90-20 cu. ft., 1/2 hp.	330	396	660

Prices, f.o.b. point of shipment, may be increased \$6 to cover cost of crating. Sales during March, 1942, are to determine discounts, allowances, and services.

The actual charges for freight and crating may be added.

Deepfreeze Division

CHICAGO—Maximum prices for the Deepfreeze unit, Model B-9-45, manufactured by Deepfreeze Division of Motor Products Corp., have been established by OPA.

Top prices for the model, of 10-cu. ft. capacity with a 1/2-hp. condensing unit, are as follows:

(1) To distributors:	Each
In carload lots	\$192
In less than carload lots	196
(2) To Deepfreeze dealers:	
"A" dealers	Zone 1 \$239 Zone 2 \$244 Zone 3 \$247
"B" dealers	245 250 254
"C" dealers	251 256 260
(3) To consumers on an uninstalled basis	400 408 414

Dealer classifications are based on sales volume potential in units per year as follows: Class "A," 50 or more; Class "B," 10 to 50; Class "C," less than 10.

Under the order, sales to distributors will be f.o.b. North Chicago, Ill.; to dealers, f.o.b. the distributor's warehouse; to consumers, f.o.b. dealers' store or warehouse. Since consumer sales do not include local delivery and installation, \$20 may be added for this service.

Bilt-Rite Refrigeration

American Refrigerator

Hill Refrigerated Products

WASHINGTON, D. C.—Orders on applications for ceiling prices for farm and home freezers produced by Bilt-Rite Refrigeration Products Corp., American Refrigerator & Machine, Inc., and Hill Refrigerated Products Co., have been issued.

Order 66, effective Oct. 23, establishes the following maximum prices for Bilt-Rite units:

Model	To Distributors	To Dealers	To Consumers
Stainless steel exterior top and side:			
8 cu. ft., 1/2 hp., compressor	\$200	\$240	\$400
12 cu. ft., 1/2 hp., compressor	250	300	500
20 cu. ft., 1/2 hp., compressor	368	442	736
25 cu. ft., 1/2 hp., compressor	414	497	828
Stainless steel top and door, baked side:			
8 cu. ft., 1/2 hp., compressor	171	205	342
12 cu. ft., 1/2 hp., compressor	222	267	444
20 cu. ft., 1/2 hp., compressor	330	396	660
25 cu. ft., 1/2 hp., compressor	371	446	742

Freezers manufactured by American Refrigerator & Machine, Inc., 615 Third St. North, Minneapolis, Minn., may be sold at the following top prices:

Model	To Distributors	To Dealers	To Consumers
8 cu. ft., 1/2 hp., condensing unit	\$180	\$216	\$360
22 cu. ft., 1/2 hp., condensing unit	360	432	720
30 cu. ft., 1/2 hp., condensing unit	490	588	980

Model FR-13 (12 cu. ft., 1/2 hp. condensing unit), a freezer cabinet made by Hill Refrigerated Products Co., of Richmond, Va., has ceiling prices as follows: to distributors, \$255; to dealers, \$306; to consumers, \$510. These prices are set by Order 69, effective Oct. 24.

All prices are f.o.b. point of shipment and may be increased by \$6 to cover crating costs if actually incurred. The orders say prices shall be subject to discounts, allowances, and services at least as favorable as comparable sales of similar commodities during March, 1942.

Charges for the actual amount of freight paid for delivery, not exceeding the lowest common Carrier rates, and for crating, not exceeding \$6, may be added on sales.



25 lb. pail illustrated.

The Ideal Dehydrant for Refrigerants

JAY CEE refrigeration gel is one of the most efficient dehydrating agents. It is especially prepared for dehydration of refrigerants, and may confidently be used for drying Freon, Methyl Chloride, Sulfur Dioxide or any other similar agent. Removes acids, prevents rust or corrosion and is not affected by oil. The special particle size retains its crystalline structure—assuring uniform distribution in the cartridge and complete contact with all pore surface areas.

We offer you this economical 25-lb. container with resealable Easy-Pour spout. Dehydrators can easily be filled from this Easy-Pour container, and resealed to protect unused contents until needed. Special gasketed cover makes Easy-Pour container air-tight when not in use.

There are excellent opportunities for jobbers and distributors to develop profitable business on Jay Cee Silica Gel in a few territories. Write for details.

JOLIET CHEMICALS, LTD., INDUSTRY AVENUE, JOLIET, ILLINOIS

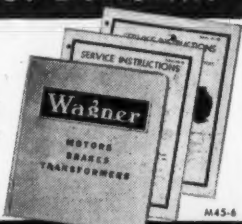


SILICA GEL

A superior dehydrant

Send For Bulletins

MU-185,
MU-30B,
and MU-7B
on Wagner
ELECTRIC
MOTORS



Wagner Electric Corporation

6471 Plymouth Avenue, St. Louis 14, Mo., U. S. A.
ELECTRICAL AND AUTOMOTIVE PRODUCTS

EASY TO USE!

Another reason why so many service-men all over the country do their buying through the

NEW 1945

AIRO Wholesale CATALOG

Refrigeration and Air Conditioning
PARTS - TOOLS - SUPPLIES

Send for your copy TODAY

AIRO SUPPLY CO. (NOT INC.)
WHOLESALE ONLY
2732 N. Ashland Ave., Dept. B
Chicago 14, Illinois

Know Your Field Men, Management Advised

DETROIT—"Get out into the field with your sales managers and your sales promotion managers. Know your own business," 200 top management executives attending Detroit's session of the National Association of Manufacturers' Clinic on Distribution at the Statler Oct. 9, were told by Arthur W. Ramsdell, vice president of Buchanan & Co., New York advertising agency.

"The topic suggested to me to discuss with you was 'Are your dealers with you?', but I believe it much more to the point to ask whether or not you are with your dealers," he told the morning session of the clinic. "It's up to you to keep in touch with them."

SUCCESSFUL PLAN

Mr. Ramsdell's experience has given him the right to speak with some authority. He began selling in 1915, and went on up until, working with the advertising firm of Batten, Barton, Durstine & Osborne in the 1920's, he developed the plan that took Electrolux refrigerators out of bankruptcy and back on a paying basis in less than 18 months.

It wasn't just a flash in the pan, either. Electrolux, you may remember, went on to sell more refrigerators in the New York metropolitan market during the next few years than all other mechanical refrigerators combined.

"Our dealers and our salesmen are equipped to tell us the things we don't like to hear and hesitate to

face," he emphasized. "But we really have no choice. We must face the facts, and use them."

"The records of the Borden Co. will give you one example. A few years ago some of the top sales executives went out through the company's assigned territories, and came back with one strong impression: People like to be talked with, but they don't like to be talked down to."

"That's a point I think most of us would accept without argument, but these men were brought up against it face to face, and it impressed them all over again. The result of that trip was Elsie, the Borden Cow, who made an unusually good record her first year and is still going strong."

What Mr. Ramsdell did not say was that the development of the idea was one of his own promotions. He was with Borden's at the time, and "Hemo" made the unusual record of turning over a net profit in the first year of its appearance.

CHECK WITH SALESMEN

"Check with your salesmen and your dealers when you're planning a new product," he advised. "They're bound to know their end of your business better than you do."

He gave an illustration of what sometimes happens when the rule is reversed. A wartime plane manufacturer decided recently that there was a damned good market coming up for mechanical refrigerators, he related.

So he hired a streamlined engineer to build him the best one on the market. The finished model had everything—a food freezer, looks, gadgets, performance, the works! He showed it to his dealers, and they said, "How much?"

He reassured them that mass production would put it in the right price bracket. So they said all right. But the dream refrigerator turned out to have a price tag just twice what their nearest competitor would be asking.

MUST KNOW BUSINESS

A manufacturer has to know his own business, Mr. Ramsdell emphasized. He has to get out into the field. One manufacturer, who has been in business for 27 years, recently took his first good look at profit and loss figures for each dealer's territory.

He found one dealer doing a business 660% of the average; another was doing 15%. An overall dealer pep talk would be of little value here, he discovered. The first dealer possibly was already hitting peak efficiency; the second showed evidence of needing real help. It's part of the manufacturer's job to know the score, he said.

It isn't as if nothing were ahead but easy sailing, he admitted. During the war, manufacturers saw material costs go up, wages hit new peaks through overtime, and efficiency generally go down. A mounting war

debt has been the result. Substitute materials and manpower reorganization still confuse the picture.

But these are not conditions that we can blame entirely on the times and the priorities of war, he said. We have depended too much on post-war shortages to create an automatic market.

SELLING JOB AHEAD

"The job ahead is bigger than we bargained for," he concluded, "and it's going to be a selling job. Give your dealer the ammunition he needs. One manufacturer has seen the answer in reducing the size of his dealers' territories, with the handling of competitive lines still forbidden. You can guess where he's heading."

"Give your dealer facts to work with—population figures in the territory he covers, market saturation figures, income level figures, merchandise shortage figures. Give him storage facilities, displays, supplies, store improvement ideas—don't start him out armed only with your product."

"Your dealers are your business partners. Give them a little study and a little help. It will pay dividends."

Jim Stewart Leaves WP3 To Rejoin Unit Air Co.

NEW YORK CITY—James W. Stewart, former partner of Unit Air Conditioning Co. here, has resigned from the War Production Board to resume his former duties, the company announces. For the past three years Mr. Stewart has been regional manager of the Conservation and Salvage Division of WPB located in region three, Philadelphia.

Dupont to Construct New Office Bldg.

WILMINGTON, Del.—Construction of a new 18-story office building at Tenth and Tatnall Sts. here will begin next spring, E. I. du Pont de Nemours & Co. announces. The new structure will serve as an addition to and will be connected to the present Nemours building.

Estimated at a cost of \$3,000,000, the building is scheduled to be completed by the spring of 1947. It will have an independent air conditioning system and many other modern features. It is planned to have construction of modern steel with brick exterior conforming to the architecture of the Nemours building.

It will be 230 feet in height and will occupy the plot on which the present Nemours building annex stands. Approximately 240,000 square feet of usable floor space will be added to the Nemours building through the new construction.

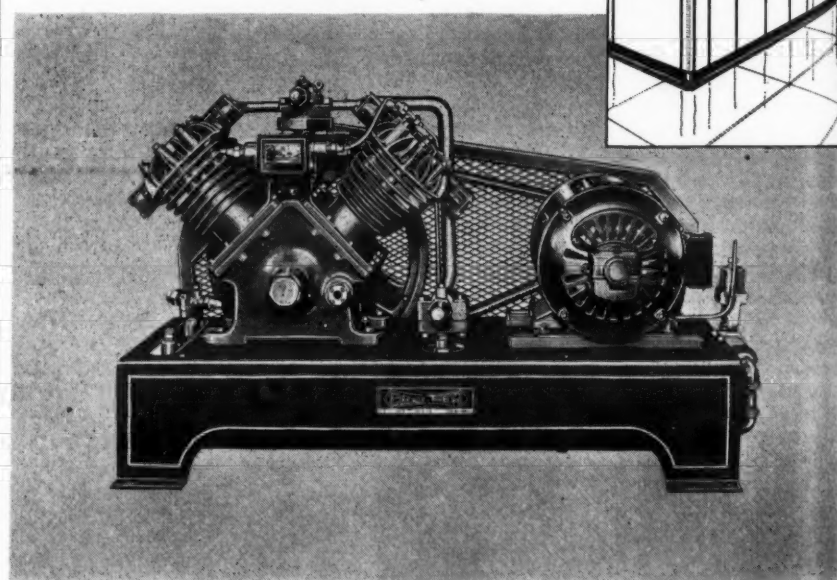
Interior construction plans call for fluorescent lighting, with fixtures of the sunken type, inset in ceilings. Four modern self-leveling elevators will be provided. The building will be accessible from the Nemours building through connecting corridors at all floor levels of the latter building.

New Richmond, Va., Firm

RICHMOND, Va.—Standard Cooler Corp., here, has been granted a charter by the State Corporation Commission to manufacture and deal in refrigerating equipment. Maximum capital of the firm is \$15,000 and H. Morris is president.

Regardless of how well it is built

...YOUR COOLER IS NO BETTER THAN ITS CONDENSING UNIT!



Appearance, quality of materials that enter into its production, and proper insulation are, of course, important factors in the construction of a refrigerated cooler. But of what avail all of these advantages if it is equipped with an inferior condensing unit—the heart of its refrigeration system? And remember that the compressor is the most important part of the condensing unit.

If you are contemplating placing an order for a cooler of any type, specify that it be equipped with a reliable condensing unit... a BRUNNER UNIT. Brunner engineers are experts in the design and construction of industrial and commercial refrigeration condensing units. Their specialized experience of more than 37 years in the design and production of compressors, qualifies them to give sound and valuable

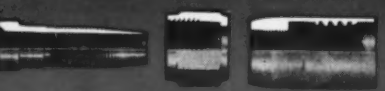
advice on any refrigerating problem. They are constantly rendering this service to designers and builders of all types of coolers—reach or walk-in—or for locker plants. This specialized experience has enabled them to design refrigeration condensing units to meet the refrigeration requirements of any type of cooler. Brunner Units have established an enviable reputation for service stability and accessibility as well as for reliability, efficiency and economy in thousands of applications throughout the world.

Ask Brunner to explain the new refinements of design and closer tolerances of their condensing units. There is a Brunner factory representative near you ready to discuss any problem of refrigeration you may have. He will be glad to see you. Write.



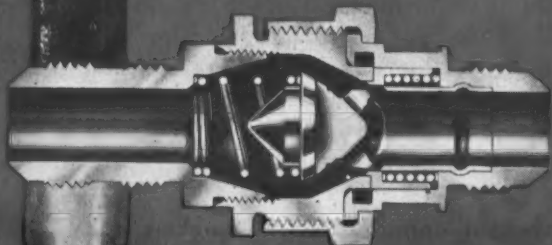
TWO MAJOR WAR DEVELOPMENTS now ready for industry

1. Aeroquip Hose Lines* with detachable and reusable fittings simplify the supply problem and save valuable time, thus helping our armed forces on all fronts.



3 PIECES (each replaceable)

Assembly without special tools. No tightening or adjustment after assembly. Fittings can be removed from hose and reused over 100 times.



2. Aeroquip Self Sealing Couplings* allow disconnection of liquid carrying lines without loss of fluid and reconnection without inclusion of air.

*STANDARD EQUIPMENT ON U. S. ARMY AND NAVY COMBAT AIRCRAFT



AEROQUIP CORPORATION
JACKSON, MICHIGAN, U. S. A.

Are you fighting HIDDEN REFRIGERANT LEAKAGE?

Spot it immediately with VISOLEAK

Detects even the smallest leaks before they cause serious damage to expensive installations and loss of costly products. Years of use have proven VISOLEAK to be dependable, economical, safe and easy to use. See your refrigeration supply jobber or write for complete information.

WESTERN THERMAL EQUIPMENT CO.
5141 Angeles Vista Los Angeles 43 Calif.

Bendix 'Reveals All' In Explaining How Its Home Laundry Is Produced and Merchandised

Unique Meeting Describes Policies To Firm's Suppliers

By Ross Potts

SOUTH BEND, Ind.—A detailed picture of the manufacturing and sales operations behind a nationally known major appliance was revealed recently when Bendix Home Appliances, Inc., makers of the Bendix automatic home laundry, outlined the entire setup to 300 top executives and representatives of Bendix's 125 supplier companies.

Bendix has never, since the appearance of the first automatic washer in 1937, been a manufacturer but always an assembler, said Judson S. Sayre, president of the company and chairman at the session.

Now, with the conclusion of the war, the company has taken another step: its washers from now on will be completely assembled by Clyde Porcelain Steel Products, of Clyde, Ohio, and by Ingersoll Steel Division of Borg-Warner Corp., in Chicago.

These companies will be fed in turn by some 125 supplier companies including, among the largest ones, General Electric, Goodyear Rubber, Carnegie-Illinois Steel, Delco, Dole Valve, Jones & Laughlin, Murray Corp., and many others.

At present only Clyde is producing, turning out between 450 and 600 units a day, Mr. Sayre said, but Ingersoll will be under way before the end of the year and will produce 120% of that number. Their combined goal under full production schedules will be 50,000 units a month.

PRESENT ASSEMBLY SETUP

This figure is four times prewar production peaks, and it is for that reason that the Bendix plant itself has discontinued assembling operations, he explained. Its maximum capacity would have been only 1,000 units a day.

Other factors made the move practical, he recounted—the geographical location of various raw materials, the complication of transportation facilities. The Bendix plant will be used instead for research, engineering, and for advertising, sales, and executive offices.

Postwar prices will be exactly those observed before the war: \$169.50 for the standard model, installed; \$189.50 for the deluxe. The 7% price increase allowed the manufacturer by OPA will be absorbed by the distributorship and dealership organization in about a one third and two thirds proportion, he said.

NEW PRODUCTS ARE PLANNED

Meanwhile other Bendix appliances are coming, Mr. Sayre revealed. An automatic ironer will appear next spring and be in full production by summer. The companion dryer unit will appear during the summer and be in quantity by fall.

The company is tooling for them now, and has settled all but final arrangements with the companies that will assemble them, but no actual contracts have been drawn up yet. Prices also have yet to be set. Does Bendix have a portable washer in view, one that is not bolted to the floor, Mr. Sayre was asked.

The company has run experiments with non-bolted models, he said, but nothing definite has been planned. The bolt is no handicap—the hot and cold water and drainoff connections necessary to any automatic washer hold even a portable unit within a small area—while the present saving in weight is important. The Bendix weighs 196 lbs.; its portable competitor weighs about 280.

How does the company's suit against Bendix Aviation stand, a reporter asked.

It is just going into court, Mr. Sayre replied, and it will be some months before any decision is handed down. The major point seems to be whether or not a radio is a home appliance. His own company was first in the field, and the name Bendix Home Appliances has reached a stage of product identity that is worth protecting.

Bendix, for instance, was the first major appliance manufacturer to have units in the hands of every one of its dealers. Sept. 17 was B-day, and 8,400 dealers across the country had brand new postwar models on their floors to show their customers that morning.

The company is not worrying about the immediate postwar market, he explained. Of the 600,000 washers planned for the first 12 months' production, 573,814 already have been sold for future delivery. Bendix's job is to stay ahead, and all their planning is shooting at that objective.

The direction of that planning was picked up by Harlow K. Lyons, the company's director of distribution.

Before production schedules can be established or sales quotas estimated, Mr. Lyons pointed out, market potentials must be determined—such facts as the number of big cities in each distributor's territory, and the population density of the territory as a whole; income levels and home ownership; retail sales volume figures, and the percentage of product saturation.

National census figures, he illustrated, show that 721 primary cities represent 65% of the national sales potential, and that the remaining 3,078 communities represent only 15%. The other 20% is taken up in 1,486 rural market areas.

Thus each territory presents a different sales story, and its variable factors have to be constantly rechecked and balanced against the sales quotas assigned to it.

SALES DEPARTMENT ORGANIZATION

Bendix sales operations flow first through four regional sales managers, Mr. Lyons outlined, placed to cover the northeast, southeast, midwest, and western United States. Under them are 10 divisional sales managers, operating out of major cities across the country.

The country's 79 distributorship territories are assigned to 77 independent distributors and two branch managers in Cleveland and Chicago, who act as distributors for the firm's two factory branches there.

These 79 men supply and work with the company's 8,738 dealers, and with the 25,000 retail salesmen they maintain.

Aside from these are five departmental sales managers, specialists in their respective fields: one for ironers, one for dryers, one for apartment houses and builders, one for utility sales, and one for product demonstrations and home service.

Each dealer is supplied with Bendix washers in proportion to his sales quotas and to his achieved sales volume, explained Mr. Lyons. On Wednesday night he fills out a report on the preceding week's business, and sends it in to his distributor.

The distributor on Friday night in turn makes out his report, a compendium of those of all his dealers, and mails it to South Bend. Thus the factory by Monday noon has a complete picture of what has happened throughout the industry up to within half a week ago.

Anybody who falls down on this reporting routine gets no tentative shipping schedule when these are set up. The dealer's tentative shipping schedule, on sight draft, is based upon his sales during the two months preceding. Periodic inventories corroborate his figures.

The responsibility of training the firm's 25,000 salesmen lies with N. D. Craighead, retail merchandising manager. The program for training them began the Monday morning before the Tuesday evening of Japan's surrender, he revealed.

A field panel of star salesmen, sales managers, and factory men set up the program, and meetings were held in eight cities, for three days and two nights in every session, to prepare 122 sales supervisors for the job.

MORE TRAINING ON SERVICE

The scheduling of increased production will also bring in a proportionally increased job of servicing, Alvin P. Smith, service manager, told the suppliers.

Service schools were launched in July, running two days a session, and were continued on through August and September, training 9,000 men to service and maintain the Bendix washer.

A visual training course, of the kind found so effective in Army and Navy training, has been used throughout, with charts and cutaway views of the washer, its assemblies,

and component parts. Take down models of the washer with them. These, and refresher courses, are permanent activities, Mr. Smith said.

The important job, the vital job, is going to be the salesman's, stated Walter J. Daily, sales promotion and advertising director. It is advertising's responsibility to make his job easier.

It is true, he confessed, that present returns would seem to put selling worries on the shelf for months to come. National surveys by a score of dependable agencies point up a tremendous market for Bendix.

A great part of the demand has grown not out of paid advertising, he disclosed, but from the person to person boosting that begins with a satisfied user.

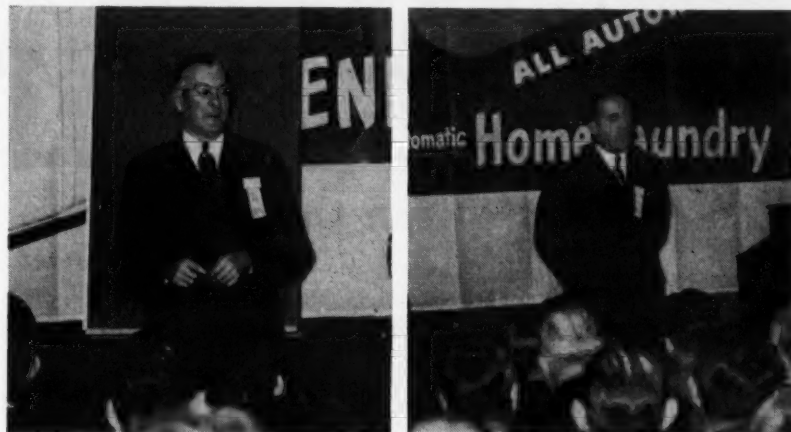
Instances such as an advertisement that appeared in the Oakland (Calif.) Tribune a few months ago: "Will give a case of Scotch to anyone who can get me a washing machine; two cases if it's a Bendix."

And a current dentifrice contest running in the national magazines and on the radio: The makers of Dr. Lyons' Tooth Powder, in the face of Pepsodent's Bob Hope and first prizes of 20 jeeps, are giving away 100 Bendix's to the top winners in their own contest.

The sale of a Bendix is not complete until the unit has been installed, successfully demonstrated, and operated by the housewife herself, said Edwina Nolan, director of the company's home laundry institute.

Utilities began using home demonstrators some years ago, she related, when they began selling electric ranges. Wives didn't know how to use mechanically operated stoves, and because they did know wood and gas

Conducting a Different Kind of Meeting



Walter Daily (left), advertising manager of Bendix Home Appliances, Inc., outlines some of the firm's unusual promotion plans, while President Judson Sayre (right) gives prices and answers questions about new products, in the meeting to which suppliers were invited to hear officials explain just how the company operates.

ranges, they were suspicious of electric controls and performance.

The same is true of an automatic laundry, she stated. And so no sale is filed away as complete until the housewife has signed a form showing that the washer has been demonstrated to her complete satisfaction.

There are 3,000 home demonstrators to give personalized service to every buyer, and 80 home service directors to supervise them, one working in each distributorship. The directors take an intensive five day course, and they train the home demonstrators in their own territories.

Familiarity with the mechanical operation of the unit is not the whole story, Miss Nolan pointed out. Dif-

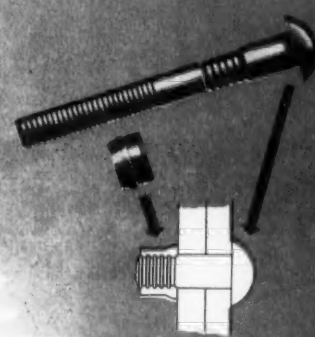
ferent treatment is required for silks, cottons, linens, woollens, and their substitutes.

There is a difference, too, in water hardness, in the kinds of dirt to be met in different localities, and in soaps used. New fabrics on the market often need special handling.

In the course of the all day session, Mr. Sayre introduced five men who are now members of the Bendix family: Col. Grant Layng, in charge of coin-operated machines and apartment sales; M. R. Rodger, public utility sales manager; V. C. Rice, in charge of product planning; W. H. Steele, head of purchasing; and L. F. Worth, automatic dryer sales manager.

Announcing the Huck LOCKBOLT

... an ENTIRELY DIFFERENT Type of Fastener



The unique Huck Lockbolt combines the advantages of both bolts and rivets in one superior fastening. First it draws the work tightly together in the equivalent of a bolting-up operation as described below; then it is rigidly and permanently locked in place like a rivet. Note these features:

BETTER THAN A BOLT

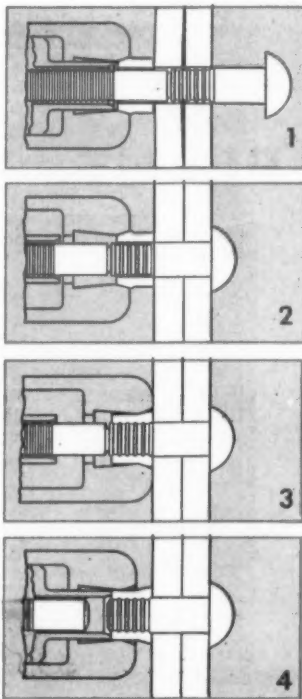
- More quickly and easily installed.
- Fastens permanently; can't loosen under any conditions of vibration or fatigue loading.
- No lock washers, cotter pins or special nuts required.
- Fills the hole completely, yet allows liberal hole size tolerance.
- Uniform tightening assured.

BETTER THAN A RIVET

- Pulls work tightly together before locking.
- Stronger. High-strength alloy steel Huck Lockbolts have a much higher shear strength than conventional steel rivets. Lockbolts of aluminum alloy provide the strength of 24ST rivets without iceboxing. Tensile strength is comparable to that of bolts of the same material.

COMPLETELY NEW OPERATING PRINCIPLE

The Huck Lockbolt consists of two precision-made parts—(1) the pin, which has a head of any desired type, locking grooves, a breakneck groove, and pull grooves which fit the jaws of the driving gun; and (2) the locking collar. The sectional views at left show the driving operation step by step.



- 1 After the pin is inserted, the collar is slipped on and the gun applied.
- 2 As the gun pulls the pin, the reaction is taken by the collar against the swaging anvil of the gun, thus drawing the work together as in a bolting-up operation.
- 3 The pull on the pin is then increased until the anvil is forced over the collar, squeezing the collar into the locking grooves of the pin to form a rigid, permanent lock.
- 4 The pin is then automatically broken off at the breakneck groove; and finally, ejector member of gun advances to push the anvil off the collar. (Drawing 4 shows this push-off step more than half completed.)

Two types of guns are available: The small hand gun, ideal for maintenance jobs, with which 6 to 10 Lockbolts can be driven per minute; and the faster, light-weight pneumatic gun recommended for production work.

MATERIALS AND SIZES

Huck Lockbolts can be furnished for both hole-filling and non-hole-filling applications, with heads of any type desired, and with pins of 24ST aluminum alloy, carbon steel, or high-strength alloy steel. Lockbolts are now available in 3/16" diameter with grip lengths ranging from 1/32" to 21/32". Lockbolts of 1/4" and 5/16" diameter will soon be available.

Consider how this radically DIFFERENT fastener can simplify YOUR assembly problems. Further information on request.

2480 BELLEVUE AVENUE

Huck MANUFACTURING CO.
DETROIT 7, MICHIGAN

Don't Spend Too Little (or Too Much) On Your Locker Plant, Operators Told

Fundamentals of Design, Maintenance Outlined for Michigan Operators

By C. Dale Mericle

GRAND RAPIDS, Mich. — "There is no point in saving \$1,000 in original cost only to have to spend, as a result of the saving, \$2,000 within a year or two in extra cost of operation, repair charges, or loss of food and customer goodwill," declared P. B. Reed of Perfex Corp., Milwaukee, in a talk before the sixth annual meeting of the Michigan Frozen Food Locker Association here recently.

"On the other hand, there is no point in going too far the other way; to spend an extra \$1,000 in equipment just to save \$50 or \$60 a year in operating cost. In between is the happy medium in which the practical businessman will be interested.

Purpose of Building

"Start with the building itself as a part of the refrigeration equipment. Aside from housing and protecting the contents, its refrigeration purpose is to keep out heat from the cold rooms. This is done by building the walls, ceiling, and floors of a material through which heat from the outside does not penetrate very readily. Such a material is called insulation.

"Some insulations are more efficient than others, but for any given insulation the amount of heat that

leaks through the wall during a given time depends upon three things.

"(1) The area of the wall (in square feet). The larger the area the greater the amount of heat that gets through, that is, twice as much heat gets through 2 square feet as through 1 square foot.

"(2) The difference in temperature between the two sides of the wall. This is known as the "temperature difference," or as "the split."

"(3) The thickness of the insulation. As would be expected, more heat will pass through a thin piece than through a thick piece of the same insulation. In fact, a piece 1 in. thick would pass twice as much heat as a piece 2 in. thick, three times as much as a 3 in. piece, and so on."

There are two other very important factors; one is the "sun-effect," and the other is moisture, pointed out Mr. Reed. A hot sun beating down on a south wall or a roof may cause that roof to be 100° instead of the outside air temperature of 80°. This effect can be reduced by allowing an air space between the roof and the ceiling of at least 24 in., and providing louvers for some ventilation, or better, providing a fan for more

positive ventilation of this small attic space.

"Another way that is very effective is to bring the warm outlet water from the condenser of the refrigerating machine and let it flow over the roof from a pipe with a number of small holes, so as to spread the water over the roof. This is very effective on flat roofs, for the water vaporizes slowly and in doing so absorbs much of the direct sun heat and thus cools the roof," continued Mr. Reed.

It Must Be Dry

"Nearly all insulations depend for their effectiveness on their being dry; just as dry clothes will keep us warm, wet clothes rapidly conduct the heat from our bodies and we get cold. Insulation can get very wet, and most insulations are almost worthless when wet. This can be prevented as follows:

"Ordinary air has some moisture in it, the amount varying from day to day. For each temperature and moisture content of air there is a lower temperature called the dewpoint, at which, and below, the moisture in the air condenses out. On a normal warm summer day of 90°, the dewpoint temperature may be about 75°; more if it is a damp day, less if it is a dry day. The temperature outside the insulation is 90°, inside the aging room 40°.

"In the insulation itself, the temperature is different at different

points. Near the inner wall it will be 45°, and near the outer wall it will be 85°. Somewhere in the insulation there is a point where the temperature is 75°. Between that and the outer wall there will be no condensation.

"But between that 75° point and the inner surface moisture will condense and soon soak the insulation and render it almost useless in keeping out heat. Therefore, the moisture must be sealed out by putting some vapor-proof material around the outside (the warm side) of the insulation. An asphalt-impregnated paper with all edges cemented and then one or two coats of asphalt paint applied on over the paper makes a good moisture seal.

What Thickness?

"Many recommendations have been made as to the thickness of insulation for the various rooms. Some run from 3 in. to 5 in. for chill or holding rooms, from 5 to 8 in. for locker rooms, and from 6 to 10 in. for freezer rooms. No set thickness can be laid down. The thickness required depends on many factors.

"What part of the country is the locker plant in? Obviously less insulation will be needed in Michigan than in Mississippi. What is the inner finish and the outside construction? The other parts of the wall have some insulating effect, too. Which wall is it? Can it be struck at any time of the day by direct rays of the sun, and if so, when and how long?

"Is the roof flat, and if so, is there an attic space? Is there a basement? If there is, is there a heating or process steam boiler in it? Is there any source of heat nearby or next door, such as a hot wall from a pressing shop or a white building across a driveway, from which heat is reflected? How cheap is electric power? If it is expensive it is wise to use more insulation and less power.

"All these things must be taken into consideration, and there can be no set answer. It is up to a capable and experienced application engineer to answer these questions, just as he must decide what size and type of cooling units are best suited for that particular job or what size refrigerating machine to use, and whether it should be air or water-cooled, or whether to use an evaporative condenser.

Floor May Buckle

"One point that can easily be overlooked is the possibility of freezing the moisture or seepage in the ground underneath the locker or freezer rooms," continued Mr. Reed. "This causes buckling and even breakage of the concrete floor. Ample insulation must be used under the floor not only to prevent this but also to prevent excessive heat leakage into the cold rooms from the ground.

"There are three general types of chilling units, or chilling coils, or evaporators, as they are also called, in use in locker plants: blower units, plates, and pipe coils.

"The blower types consist of a coil with fins about 3/4 in. apart to give extra surface and thus provide a large cooling capacity in a small space. Air is forced or drawn through this coil at high velocity by a motor driven fan. Although the air velocity over the coil is high, which is conducive to high efficiency of the coil, the air velocity throughout the locker or freezer room need not be higher than with other types of chilling units.

"This type is especially applicable to the chill or holding rooms that are maintained above freezing. They can be automatically controlled to defrost themselves between each run so that they do not have to be scraped or brushed free of frost.

"If used in locker or freezer rooms they cannot be defrosted in the same manner, for the room air is always below freezing so that the coil cannot defrost itself. However, they can be equipped with a water-defrosting arrangement whereby the coil can be totally enclosed to keep out the cold, below-freezing air of the locker or freezer room and water flowed down over the coils, melting off the frost.

Use of Blower Coil

"The blower type coil may be incorporated in a large cabinet for freezing trays, so that a separate freezing room is not required. Such arrangements are practical for the small locker plant that does not do a great deal of processing or freezing or that may be a branch plant and the chilling and freezing done at the main plant," suggested Mr. Reed.

"Plate coils consist of two plates into which have been formed passages for the flow of the 'Freon' or ammonia. This gives more surface than bare coils only, but not as much as finned coils, but unlike the latter they can be rather easily scraped and brushed free of frost. Several plates are grouped together and fed from one expansion valve.

"Plate coils are popular because they are easily cleaned, provide considerable surface for a given space, induce good air circulation, and are relatively light in weight, which is a factor, as they are usually hung from the ceiling," he stated.

Bare Pipe Coils

"The older type of coil for below freezing applications is the bare pipe coil. It is made up of bare black or galvanized steel pipe, usually about 1 1/4 in. size, and can be formed into almost any size or shape. It will stand a lot of rough treatment in scraping or brushing, but is not too easy to scrape or brush clean. It is heavy and takes up a comparatively large amount of space. It still keeps its popularity with many engineers because of its low cost and ruggedness.

"For heat to pass from one object or food to another, the one must be warmer than the other. As water flows downhill, heat always flows from the higher to the lower temperature. The greater the temperature difference, the greater the rate of heat transfer.

(Concluded on next page)



At Left: A part of the Curtis Compressor equipment serving the refrigerating requirements of the plant.

Below: Exterior of locker plant — 830 lockers.



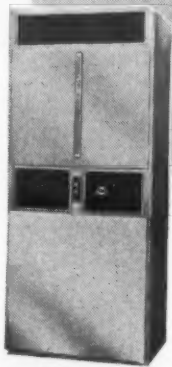
CURTIS REFRIGERATION - Is the Heart of This Efficient LOCKER PLANT

Refrigeration dealers can not only profit by constructing new locker plants, but there is profit to be gained in rebuilding and modernizing plants that are not adequately refrigerated or insulated. In many locker plants throughout the country, CURTIS Refrigerating Units are proving the answer to the demand for dependable, efficient, trouble-free performance throughout an exceptionally long machine life.

WRITE FOR COMPLETE STORY ON THIS UP-TO-DATE CURTIS-EQUIPPED LOCKER PLANT
Bulletin RX-3 will be mailed on request

CURTIS REFRIGERATING MACHINE DIVISION
of Curtis Manufacturing Company

1912 Kienlen Avenue • St. Louis 20, Missouri



3 and 5-ton Packaged-Type Air Conditioner.

Ask about Curtis Air-Conditioning Equipment, too.



STANGARD

Prime Surface

COLD PLATES

For Maximum Refrigerating Efficiency



THE STANGARD-DICKERSON CORPORATION

46-76 Oliver Street • Newark 5, N. J.
STANGARD KNOWS REFRIGERATION

Copyright 1945 by The Stangard Dickerson Corporation

FOR VICTORY BUY MORE WAR BONDS AND STAMPS

Operating a Locker Plant

(Concluded from preceding page)

ture difference, the greater the heat flow. If a locker room is held at zero, the chilling coil for that room must be below zero, usually about -10°.

"If the coil were -20° the greater would be the heat flow to the coil, so the coil could be much smaller, about one-half as big in fact, for the temperature difference would be 20° instead of 10°. A -30° coil could be even smaller, so as far as the coil itself is concerned, it would cost less and take up less space to run it very cold, that is, with a large temperature difference between it and the room. It would collect frost faster and would dry out the foods more, however.

"It works just the opposite for the refrigerating machine," explained Mr. Reed. "It has a greater capacity when it is working on a 25° coil than on a 10° coil, or when working on a -10° coil than on a -20° coil. As a rule a larger coil, so that a small temperature difference can be maintained, is cheaper than a larger refrigerating machine, so it pays to buy a large coil and a small machine than vice versa. This is especially true in low temperature work where the machine capacity drops off rather rapidly, as the chilling coil temperature goes down.

A Practical 'TD'

"A very practical temperature difference is between 5° and 10° for locker and freezer rooms. Temperature differences of as much as 15° are sometimes used, but should be avoided wherever possible.

"The most important point in connection with the chilling unit temperature and its effect on the refrigerating machine is that not only is the machine's capacity greater at the higher temperatures, but also its efficiency is greater, so that the machine can produce a ton of refrigeration much cheaper at the higher chilling coil temperature (a large coil) than at the low coil temperature (a smaller coil) and the cost of operation is reduced. This affects several years and the savings in operating cost may very easily amount to several times the difference in cost of the larger coil.

There has been a great deal of discussion as to whether to use one,

two, or three refrigerating machines on a locker plant and there again there is no one answer for all plants and all conditions. For the smaller plant of around 400 lockers with a cabinet type combination freezer unit and chilling coil for the locker room, with no chilling or holding room, and not much processing, one refrigerating machine is enough.

"For a large locker plant of 1,000 or more lockers with separate rooms for chilling, holding, aging, curing, pickling, etc., three machines would be used, one for the above-freezing rooms held at about 36° to 38°, the locker room or bulk storage room held at about zero, and the freezer room which may run as low as -25° or -30°," said Mr. Reed.

Two Good Rules

"However, there are two good rules that may be followed: (1) Do not put on the same machine, two rooms whose temperatures are more than 10° apart. The refrigerating machine must run at the proper pressures for the lower temperature which penalizes it on the higher temperature coil.

"(2) Do not put on the same machine two rooms at different temperatures if the low temperature room is not over one half of the total load on the machine. Doing so would penalize the machine on most of the load to take care of the smaller part of the load.

"Shall the machine be air-cooled or water-cooled? To this question there can be an answer, but again the answer should be supplied by the application engineer designing and laying out the locker plant. If it is a small plant he may find it most economical to use an air-cooled machine on perhaps a part of the installation, especially if the available water is warm and the rate high. It will not be often, however, that he will decide on using an air-cooled machine over 1 hp.

"The water from a water-cooled condenser is clean, and it is quite practical to use it for washing foods, tables, etc., or other purposes.

"Locker plants requiring refrigerating machines having a total of 5 hp. or greater, especially in those areas where the water rate is rather high or where the water is warm (75° or more) during a part of the summer, would do well to consider

the use of the evaporative condenser which saves about 90% of the condensing water usage, although there is a cost of electricity to run the pump and fan of the evaporative condenser, so that the 90% water saving is not all realizable.

"In designing the plant be sure that sufficient space is allotted to a room for the machines, so that they are not jammed in so closely that they cannot be effectively ventilated, oiled, or serviced. Water-cooled machines must have ventilation, also, to dissipate the heat from the motor and compressor. Difficulty in oiling the machine may cause neglect and costly repairs and shut-downs. The service man needs room around the machine especially if he must remove a compressor or condenser.

"If the refrigerating equipment has been properly selected and carefully installed and tested, it should operate with very little trouble. If the chilling coils, the connecting lines, or the machine, have been skimped or ill-chosen, an abnormal amount of trouble may be expected, even from the start. If the installation is carelessly made and tested, and there are leaks in the system, frequent service calls will result.

"It is, therefore, advisable to employ only a capable and experienced service man, one who knows his business and is conscientious in his work. The size of his organization has little bearing on his ability or reliability. Some of the best refrigeration service men operate small shops and do most of their own work. Do not employ a service man just because his rates are low. The man who charges you \$2.50 per hour may be cheaper in the long run than the \$1.25 man.

"More and more, industrial users of refrigerating equipment are practicing 'preventive maintenance,' which means to have the service man make an inspection of the equipment at least once each month, or in the case of the larger plants, once each week. He should check the temperatures and pressures, whether or not the coils are all frosted, belt tension, refrigerant charge, and oil-level in motor or fan bearing wells or cups.

Preventive Maintenance

"You yourself can take a part in preventive maintenance by seeing that the following rules of good care are observed and carried out," Mr. Reed told the locker operators.

"(1) Keep the chilling coils clean of frost. Scrape or brush them off when the frost begins to get as much as 1/4 in. thick.

"(2) Keep all motor and fan bearings oiled regularly with SAE 20 automobile crankcase oil unless the manufacturers' instructions specify a different grade.

"(3) Keep the equipment clean. Wipe off the machines occasionally to remove excess oil and dust. Pull the switch before doing so, even though the machine or fan is not running at the time; an automatic control may start it while you have your hand in danger.

"(4) Keep boxes, crates, trash, and other obstructions away from the equipment. It is important to maintain ventilation around the machines.

"(5) Do not obstruct airflow from chilling coils, either the blower or gravity circulation types, by piling food or other objects in front or in the path of air circulation. Uniform air circulation throughout the room

is essential to the proper distribution of the cold air.

"(6) Keep employees or unauthorized persons from tampering with equipment, especially the controls."

A-E FROZ-N-FOOD LOCKERS

NEW PROFITS FOR YOU



Sell Froz-N-Food lockers. They're the preferred lockers that assure you more profits. And, at the same time, bring customers complete satisfaction. Note their many special features, such as: glide-easy drawer action, long lasting steel construction, beautiful two-tone finish, drawer units shipped factory assembled — these and other features mean a quick selling line, a profitable line.

Write A-S-E for additional information.

ALL-STEEL-EQUIP COMPANY, INC.
450 GRIFFITH AVE. AURORA, ILL.

ANSUL



ST IN REFRIGERANTS

Ansul was first in America to produce Sulfur Dioxide for refrigeration (1915).

At the demand of the growing fractional-tonnage household refrigeration industry, Ansul began production of Methyl Chloride.

Ansul still analyzes *individually* every cylinder before it is shipped because—

The purity, dryness, and safety of handling of Ansul refrigerants are still top standards of a high-specification industry which Ansul is proud to have pioneered.



*REG. U. S. PAT. OFF.

ANSUL CHEMICAL COMPANY

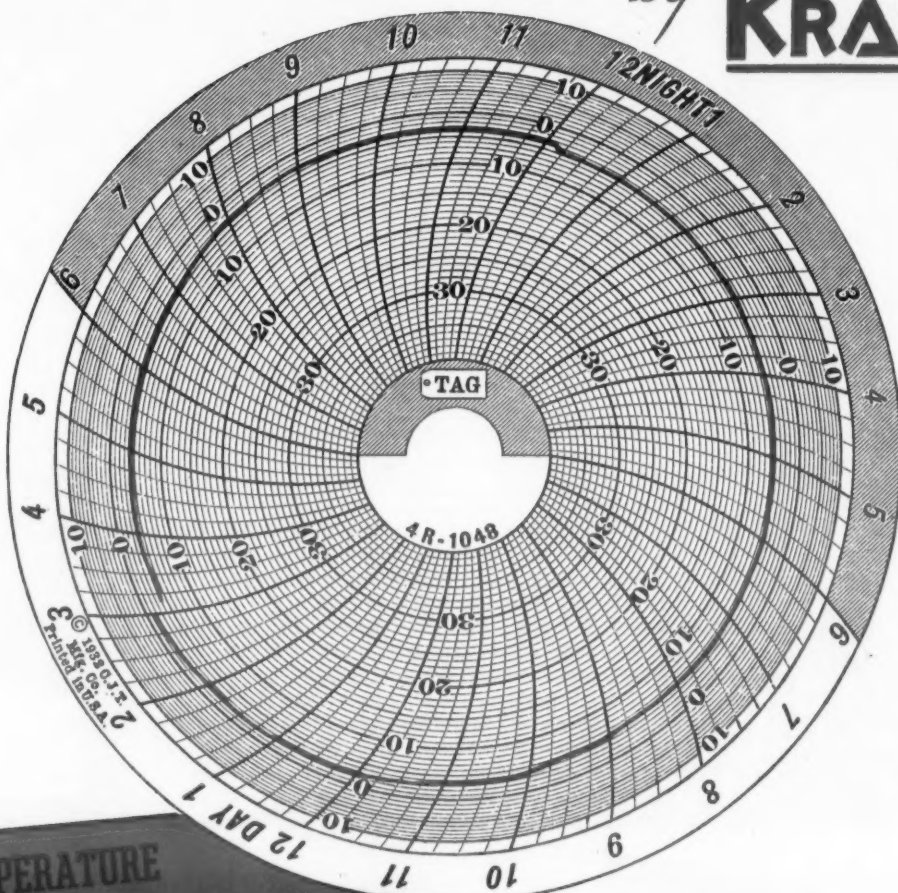
"NOW IN OUR 30TH YEAR"

MARINETTE, WISCONSIN

AGENTS FOR KINETIC'S "FREON-11," "FREON-12" AND "FREON-22"

THERMOBANK

by **KRAMER**



TEMPERATURE RECORD of a SELF-DEFROSTING LOCKER ROOM

With the THERMOBANK, a zero degree system is just as automatic as a 40° system only more so.

NO MINE SPRAY • NO WATER SPRAY
NO ELECTRIC HEATERS

THIS is an actual 24-hour temperature record of a Thermobank installation in a locker storage room of 500-locker capacity. During this 24-hour cycle, seven defrost operations took place. The equipment consists of two Thermobank evaporators, each connected to a separate compressor with a separate Thermobank. The compressors defrost independently of each other at staggered time settings, thus obtaining a minimum of temperature fluctuation in the locker room during defrost.

The installation was made by the Refrigeration Corporation of America, 241 W. 64th Street, New York, N. Y.

SEND FOR BULLETIN TV-345 N

KRAMER TRENTON CO., Trenton, New Jersey

Crawford Heads Indoor Climate Institute; G-E 9-Month Net Educational Program for Consumers Starts Is \$36 Million

DETROIT—T. A. Crawford, general manager of Timken Silent Axle Co., was elected president of the Indoor Climate Institute at its second annual meeting held here last week at the Book-Cadillac hotel. Mr. Crawford succeeds P. B. Zimmerman.

L. N. Hunter of the National Radiator Co. was elected first vice president; R. E. Moore of Bell & Gossett Co. and E. N. McDonnell of McDonnell & Miller were re-elected secretary and treasurer, respectively.

"The Indoor Climate Institute for the past three years has been analyzing the many phases of the related industries which contribute to controlled indoor climate," reported Mr. Crawford. "As the first step in providing the public with unprejudiced information on the subject of heating and cooling for the home, the Institute has launched a program based on the idea of automatically fired central heating systems."

"A very understandable consumer booklet dealing with central heating systems of all types burning gas, oil, or coal will, for the first time, provide the public with information which will be most helpful to the new home builder and in the modernization of old homes," he declared.

"The booklet will contain the best thinking of the various trade associations composing the heating industry. The nationwide distribution of the booklet by the Indoor Climate

Institute and its membership will prove a definite incentive for home owners and building contractors to turn to the heating contractors and installing dealers for more information on heating systems tailored to heating requirements."

It is reported that Indoor Climate Institute will, in the near future, also take under consideration the development of a national advertising campaign and promotional activities which will focus the attention of the public and all allied groups in the building industry upon the subject of greater indoor comfort and health through adequate heating systems.

At the annual meeting the following were elected to the board of directors: Paul K. Addams, Fitzgibbons Boiler Co., Inc.; A. T. Atwill, Quaker Mfg. Co.; C. T. Burg, Iron Fireman Mfg. Co.; Thomas Byrd, The Lau Blower Co.; R. C. Cameron, Chrysler Corp., Airtemp Division; Bruce T. Cunningham, Research Products Corp.

J. K. Knighton, Servel, Inc.; C. E. Lewis, Perfex Corp.; C. D. Lyford, Minneapolis-Honeywell Regulator Co.; J. M. McClintock, Freeman Stoker Division, Illinois Iron & Bolt Co.; J. P. McIlhenny, Air Conditioning Department, General Electric Co.

Joseph R. Murphy, Taco Heaters, Inc.; C. A. Olsen, the C. A. Olsen Mfg. Co.; Gordon Rieley, The Bryant Heater Co.; Jack Searls, White-Rodgers Electric Co.; and Martin Weil, Weil-McLain Co.

SCHENECTADY, N. Y.—General Electric Co. profit available for dividends for the first nine months of 1945 amounted to \$36,242,727, or \$1.26 a share of common stock, President Charles E. Wilson announced. This represented an increase of 14% over the \$31,705,839, or \$1.10 a share, earned during the corresponding period of last year.

Net sales billed, representing shipments, during the first nine months this year totaled \$948,432,369 or 9% less than the \$1,036,634,375 billed in the same period a year ago. This lower volume reflected the cancellations and cut-backs of orders for war products and the starting of the reconversion program.

As a result of these factors, together with a reduction in income from sources other than sales, the company's total income was 26% less than in the first nine months of last year, but this decrease was more than offset by a 35% reduction in the amount set aside as provision for Federal taxes on income and for contingencies so that there was an increase in the profit available for dividends.

A dividend of 40 cents a share of common stock was paid on Oct. 25 to 239,824 stockholders for the third quarter of 1945 making a total of \$1.20 a share in dividends for the first nine months of 1945, compared with \$1.05 a share paid for the same period in 1944. This will be the 193rd dividend paid by G-E.

Herman Nelson Appoints Representative and 5 Distributors

MOLINE, Ill.—A new representative and five distributors have been appointed by the Herman Nelson Corp., manufacturer of heating, ventilating, and air conditioning equipment here, Charles S. Stock, sales manager, announces.

E. H. Langdon Co., 966 Dexter Horton Bldg., Seattle 4, Wash., will serve as the Herman Nelson representative in the Seattle-Tacoma area.

New distributors are as follows: Industries Supply Co., 345 Fourth Ave., San Diego, Calif.; Paul B. Rayburn, Jr., president.

Wisconsin River Supply Co., Wausau, Wis.

Bond Supply (main office), 522 N. Rose St., Kalamazoo 12, Mich.; A. C. Rowen, president, and T. J. Hughes, sales manager.

Bond Supply Co. (branch), 54 Barney St., Battle Creek 14, Mich.; W. Margeson, manager.

Baker Specialty & Supply Co., Inc., 701 Erie Ave., Logansport, Ind.

Training of personnel for the five distributorships will be provided by the Herman Nelson Co. personnel located in those particular areas, with the exception of the San Diego office where F. J. Hearty Co. of Los Angeles will provide the training.

3 Cabinets Listed For Surplus Sales In Detroit Area

CHICAGO—Three salvage refrigerators are listed among the miscellaneous refrigeration and electrical equipment soon to be sold as government surplus by the regional office here of the Department of Commerce.

Two of the refrigerators are Crosley models, the other a Grunow. None has a unit. All are in Detroit.

The Grunow is a Model 875D of 6.7-cu. ft. capacity and is without ice trays. One of the Crosley cabinets is a Model FA-40, of 4-cu. ft. capacity; the other is a Tri-Shelvardor, Model F-55, of 5.5-cu. ft. capacity and minus ice trays.

Other equipment, all new and located in Elwood, Ill., includes one coil spring for Westinghouse refrigerator, two Fridaflap flapper and plate valves and one Fridaflap valve and plate.

Simplified sealed bids may be obtained by writing Region V, Office of Surplus Property, Department of Commerce, 209 S. LaSalle St., Chicago 4, Ill. Bids must be received by Nov. 25, according to F. A. McLaughlin, regional deputy director.

Book Review

"Training for Supervision in Industry," by George H. Fern. Published by McGraw-Hill Book Co., Inc. 188 pages. \$2. Reviewed by Lorraine K. McNinch.

In his recently published textbook "TRAINING FOR SUPERVISION IN INDUSTRY," Mr. George H. Fern gives a presentation of the responsibilities confronting the supervisor in the increasingly important role he is assuming in modern industry.

The problems involved, their causes and their solutions, are presented to the reader in a clear and concise manner, a great deal of the information having been compiled in the form of readily understandable diagrams and charts.

Mr. Fern places particular emphasis upon the phase of training the supervisor as an instructor. He recommends the Training Conference as a method of pooling knowledge. Through these group discussions, the participants select the most effective means of solving the various problems which they encounter while working in a supervisory capacity.

Topics included in the discussion cover a wide range of pertinent subjects, such as prevention of accidents, women in industry, launching the new employee, job analysis and breakdown, leading a conference, available training courses for vocational guidance, etc.

While most of the author's suggestions are not entirely novel—such courses of supervisory training having been introduced into many industrial plants upon their conversion for peacetime to wartime production—nevertheless, Mr. Fern's new manual is a comprehensive summary of the most up-to-date procedure for training intermediaries between labor and management.

Grannis Assigned to Coast by Westinghouse

SAN FRANCISCO—J. E. Grannis has been named sales development manager for the electric appliance division, Pacific Coast district of Westinghouse Electric Corp., J. J. Moffatt, manager of the corporation's Pacific Coast electric appliance division announces. He will make his headquarters here.

Mr. Grannis was associated for nine years with the General Electric Co. He also spent three years as a small appliance and vacuum cleaner specialist for Landers, Frary, & Clark on the Pacific Coast, and a year and a half as liaison engineer for Dalmador, Inc. before coming to Westinghouse.

HERE COMES THE

First COOLERATOR Home Freezer

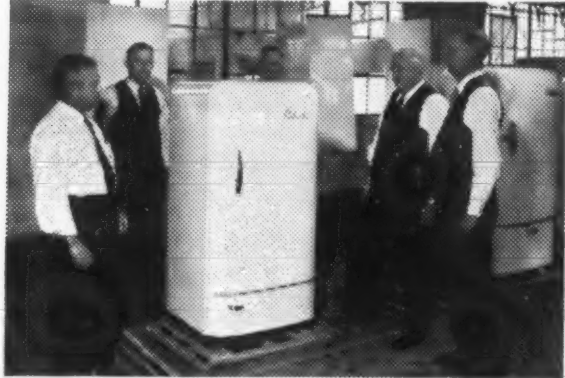
OFF THE ASSEMBLY LINE!



Model F-15
Coolerator officials
admire the first Coolerator
Freezer to roll off
the Assembly Conveyor.

ALSO IN PRODUCTION...

during October—the
newest Coolerator Ice
Conditioned Refrigerator.



A favorite with American housewives as proved in survey after survey! No other name has ever been associated as long or as strongly with fine ice refrigeration. Almost 1,000,000 women say it's top!

With production of the famous new Coolerator Electric scheduled to start this month, we know our friends will be interested in these photographs showing actual volume production of the freezer and ice refrigerators. With the end of the war and the reconversion of our plant to the building of peacetime products, the makers of Coolerators are ready and more than anxious to supply you with the best possible equipment. This is a reminder to keep in touch with your Coolerator distributor so that you will have the latest information on availability of Coolerator's profitable line.

Coolerator

THE COOLERATOR COMPANY, DULUTH 1, MINN.

Announcing

•

NOW... STAINLESS STEEL
Cafeteria Cabinets

NOW... LOW-TEMPERATURE
Bakery Coolers - 34°

NOW... LOW-TEMPERATURE
Coolers for Bottlers

WATER COOLERS & FILTERS
FOR EVERY APPLICATION

Current Prices & Catalogs Now Available

FILTRINE MFG. CO.,
53 LEXINGTON AVE. BROOKLYN 5, N. Y.

Final Draft of A.S.R.E. Code for Rating And Testing Air Coolers Nears Adoption

NEW YORK CITY—Final draft of the proposed A.S.R.E. Standard Method of Rating and Testing Forced Circulation and Natural Convection Air Coolers is now being circulated among the membership of the American Society of Refrigerating Engineers, and final action on the adoption of the standard is considered likely at the annual meeting this December.

The standard is the product of the Joint Committee on Rating Commercial Refrigerating Equipment and represents the views of A.S.R.E., the American Society of Heating & Ventilating Engineers, Air Conditioning & Refrigerating Machinery Association, and Refrigerating Equipment Manufacturers Association.

It will prescribe methods of rating and testing forced circulation and natural convection air coolers for refrigeration. It does not include air conditioning units.

The ratings will require the following data on cooling:

a. Gross cooling effect for forced circulation pressure type air coolers and net cooling effect for forced circulation free delivery air coolers.

b. Sensible heat ratio, sensible cooling effect divided by total cooling effect. (Optional for forced circulation free delivery and natural convection air coolers.)

c. Name of refrigerant or refrigerating medium for either volatile or non-volatile refrigerant. If a brine is used, its composition, density, and specific heat should be stated.

d. Temperature and pressure of volatile refrigerant vapor leaving the air cooler.

e. Temperature and pressure of volatile refrigerant liquid entering the refrigerant control device or heat interchanger, if supplied.

f. Temperatures of non-volatile refrigerant entering and leaving the air cooler.

g. Quantity of non-volatile refrigerant circulated in gals. per min.

h. Pressure drop of non-volatile refrigerating medium in lb. per sq. in., between the inlet and outlet connections of the air cooler for the stated flow.

i. Power consumption of each auxiliary, such as pumps, where they are regularly supplied as part of the air cooler.

j. Spray pressure in lb. per sq. in. gauge and the quantity of liquid sprayed in gal. per min.

The standards also provide that data on air flow shall include:

a. Air volume delivered by the air cooler in c.f.m. of Standard Air as defined herein. (Not required for natural convection air coolers.)

b. The value of external resistance in inches of water for pressure type air coolers, at rating conditions.

c. The value of internal resistance, in inches of water for pressure type air coolers, for which the air flow is specified.

d. R.p.m. of fan.

e. Fan motor power input, in watts for air coolers supplied with motor.

f. Fan horsepower required for air coolers not supplied with motor.

g. Horsepower (nameplate rating) of fan motors, or motors of free delivery air coolers.

Department Stores Ready to Spend \$60 Million for Air Conditioning

CHICAGO—The nation's department stores, set to spend \$60,000,000 for new air conditioning equipment, are losing no time in getting that phase of their projected billion dollar modernization program under way.

Throughout the country, department stores report rapid progress in plans for air conditioning installations and at least one big store—Mandel's in Chicago—already has put in operation a new 800-ton compressor unit to service four floors of a 16-story building, according to the Refrigeration Equipment Manufacturers Association.

The Mandel's installation takes the place of a 300-ton unit used during

the war by the War Production Board in a synthetic rubber plant in the South. Although it serviced the same four floors, including restaurants, tearoom, beauty and fur salons, and women's ready-to-wear departments, this unit was considerably smaller than the new one, and the fact that the store decided on a more than doubled capacity is indicative of the added stress being put on air conditioning by sales executives, it was said.

Numerous improvements in department store air conditioning systems—notably the use of new refrigerants and evaporative condensers, the latter reducing the amount of water

consumed by as much as 80%—make conditioned air even more attractive than before the war from a sales standpoint.

Modern store systems today cleanse the air, provide adequate ventilation and control humidity, as well as regulating temperature, especially cooling it in the summer.

These added advantages, Rema reports, warrant the prediction that air conditioned department stores will increase at a far more rapid rate than before the war. But even with this increase, it is believed that the "saturation point" in air conditioned department stores will not be reached for 15 to 20 years.

Comments from various sales heads of Mandel's, where some 100 departments now are air conditioned, show the influence cooled and conditioned air has on business volume.

A MAN IS KNOWN BY THE COMPANY HE KEEPS...



Ranco Controls, used for replacements, have kept many refrigerators running during the past four years. The work of service men in the industry can never be properly evaluated and compensated. But this work will pay dividends in the years ahead, because more and more individuals have learned about Ranco Controls at first hand, and they know their accuracy and dependability.

What is good in times of stress is equally good in times of peace. Your Ranco Jobber will soon be able to serve you more completely than ever before. Meanwhile, we ask your cooperation while stocks are building. Let us go along together to build a more secure Tomorrow.

Type 91-0 Exclusive Interlocking Two-Temperature Control. For use on single or multiple unit systems. For natural or forced convection units. High relative humidity. Automatic defrosting of coil regardless of weather or load conditions or cold location of compressor.

Ranco Inc. COLUMBUS, OHIO

Cooling System Will Hold Close Limits For New Chicago Lithographing Plant

CHICAGO—Air conditioning which controls temperatures to within 1° and humidity to within 1% of desired levels shortly will result in faster and less costly printing on paper that is more thoroughly seasoned and thus of better quality.

Forerunner of a trend that is expected to spread rapidly in the printing industry, this improved type of air conditioning already is being installed in a new \$1,900,000 printing plant now under construction here by the Newman-Rudolph Lithographing Co. It is believed to be the first plant of its kind to have a so complete and closely controlled air conditioning system—even the windows are to be triple-glazed, with hermetically sealed air spaces between the panes.

Reporting details of how all this is being accomplished, Charles H. Newman, president of the lithographing concern, told members of the Refrigeration Equipment Manufacturers Association that the system will solve numerous problems hitherto encountered in his industry.

Aside from maintaining working conditions that are ideal for comfort, the plant's air conditioning first of all will save both the time and space ordinarily required in the seasoning of lithograph paper to the climatic conditions inside the plant, Mr. Newman said.

Formerly, he explained, varying temperatures caused the paper to stretch, shrink, curl, or wrinkle during processing and considerable space has been needed for hanging the

paper for proper seasoning before use. To this saving in space and time cost will be added the advantage of better quality paper.

Another important economy resulting from the air conditioning in the plant will be a reduction in spoilage, coincident to the making of lithograph plates, Mr. Newman reported. It is the egg albumen used in the process which spoils if it becomes too warm.

Printing production will be speeded throughout the entire year in the plant since the air conditioning system's design calls for year-around temperature control. The equipment itself will be installed in a monumental tower at the center of the building to conserve space and enhance the design.

Ground was broken early in October for the four-story building, covering 53,500 square feet in the block bounded by Congress, Van Buren, Jefferson, and Des Plaines Streets. Investment in land and building will be about \$1,900,000, Mr. Newman told REMA. He said that two years' planning enabled the company to get under way so promptly. The building will be ready for occupancy about May 1, 1946.

Architectural styles of the building, designed by R. N. Friedman, of the firm of Alschuler & Friedman, architects, will be modern. Exterior will be of brick, with granite and Indiana limestone trim. Construction will be steel and concrete with a floor load of 250 pounds per square foot.

OPPORTUNITY FOR APPLIANCE SALES MANAGER

A Detroit Distributor of a new, nationally advertised, complete line of household appliances and radios offers a wide-open opportunity to an energetic Sales Manager.

The following qualifications are desirable: Should have had experience in contacting and appointing dealers—knowledge of household refrigeration and major appliances required. Experience in commercial refrigeration field helpful, but not essential—must have pleasing personality, alertness, good appearance, and good health. Must like field contact work.

Excellent opportunity for aggressive man who wants to tackle a successful field in promotion and selling. Salary open.

Our employees have been notified of this advertisement.

Address Box No. 1850, Air Conditioning & Refrigeration News

"WITH THAT BACK OF US, ED, THE JOB WILL BE A CINCH!"



In the highly competitive days ahead, depend upon G. E. for the extras that help you build business—

Besides producing the finest air conditioning and refrigerating equipment for you, G. E. offers a lot of little things to make your job simpler. For instance, you have the steady help of consistent trade advertising to tell your story where you want to sell. You're backed up by planned promotion and merchandising, catalogs and instruction manuals full of show-how. The vast resources

of a big company are at your service for any problem you meet.

A big company like G. E. can give you these business building extras. They go with the famed G-E monogram that assures the highest standards of performance and dependability. With all that back of you, any job you tackle should be easier! For more about the extras that help build sound business, see G. E. first. General Electric Company, Air Conditioning Department, Section 57010, Bloomfield, New Jersey.

BUY... and hold... WAR BONDS

GENERAL  ELECTRIC

Air Conditioning

Electrimatic

AUTOMATIC CONTROL VALVES AND REGULATORS

2100 INDIANA AVENUE • CHICAGO 16, ILL.



CHICAGO SHAFT SEALS

Acknowledged as the industry's most effective seal for replacement (even on scored or bent shafts) because it has the self-adjusting sleeve lock. Quickly installed. For REAL SATISFACTION never accept a substitute. At all jobbers.

CHICAGO SEAL CO.
20 NORTH WACKER DRIVE, CHICAGO 6, ILL.

More important than ever

in the war on moisture

Order from your jobber



IMPERIAL TORPEDO DEHYDRATOR

One piece streamlined shell—fewer joints—no soft solder—less chance of leakage. Copper and brass construction. Packed with "Silica Gel". Built in sizes up to 7 h.p. IMPERIAL BRASS MFG. CO., 565 S. RACINE AVE., CHICAGO 7, ILL.

CHECK THESE FEATURES

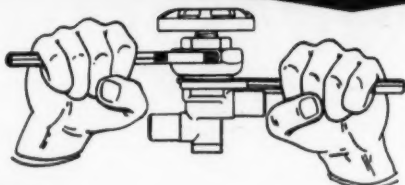


FIGURE 1—Shows wrenches properly applied to main body and auxiliary body for breaking the joint; the first step in disassembling the valve.



FIGURE 2—Observe here the entire internal assembly being removed by hand.

FIGURE 3—The entire internal assembly has been removed from the main body.

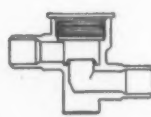


FIGURE 4—The main body, devoid of all internal parts, is now ready for cleaning and fluxing of the sweat tube connections preparatory to soldering.

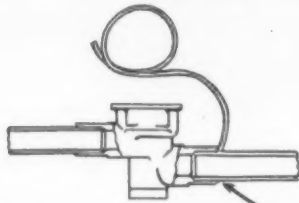


FIGURE 5—Refrigerant lines are soldered to the valve connections in the usual manner. Danger of distorting internal parts is eliminated because all these parts have been removed.

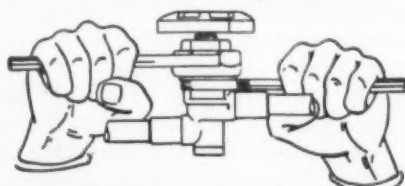
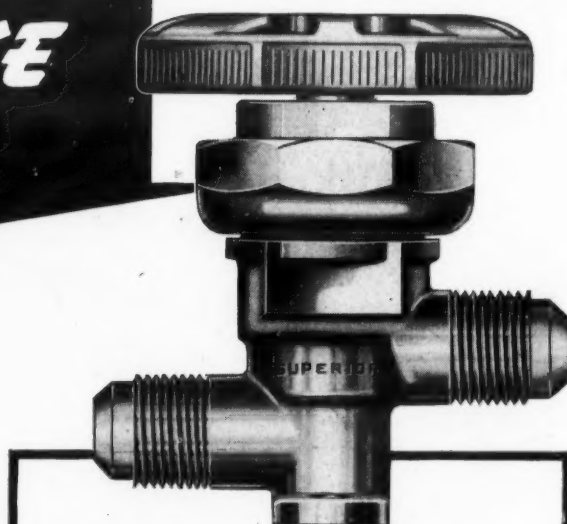


FIGURE 6—Final step is remaking the joint between the main body and auxiliary body. Note: Valve stem must be in full open position when tightening upper assembly into main body.



Superior DIAPHRAGM PACKLESS VALVES

The only diaphragm packless valve with the internal assembly removable as one complete unit . . . a valuable feature when it comes to soldering lines to the valve connections. No need to break the diaphragm seal . . . simply remove the internal assembly as a unit . . . solder the connections . . . and replace the assembly. No fuss . . . no bother . . . no special tools . . . and above all, no damage to vital parts. What could be simpler!

But that's not the only important feature of these SUPERIOR DIAPHRAGM PACKLESS VALVES! Pressure responsive cup forms positive pressure-tight seal . . . permitting replacement of the diaphragm with full pressure in the valve . . . or even actual operation of the valve without the diaphragm . . . in an emergency.

Rugged, pleasing appearance—ease of operation—generous openings—extra long life—all these are standard features of the valve.

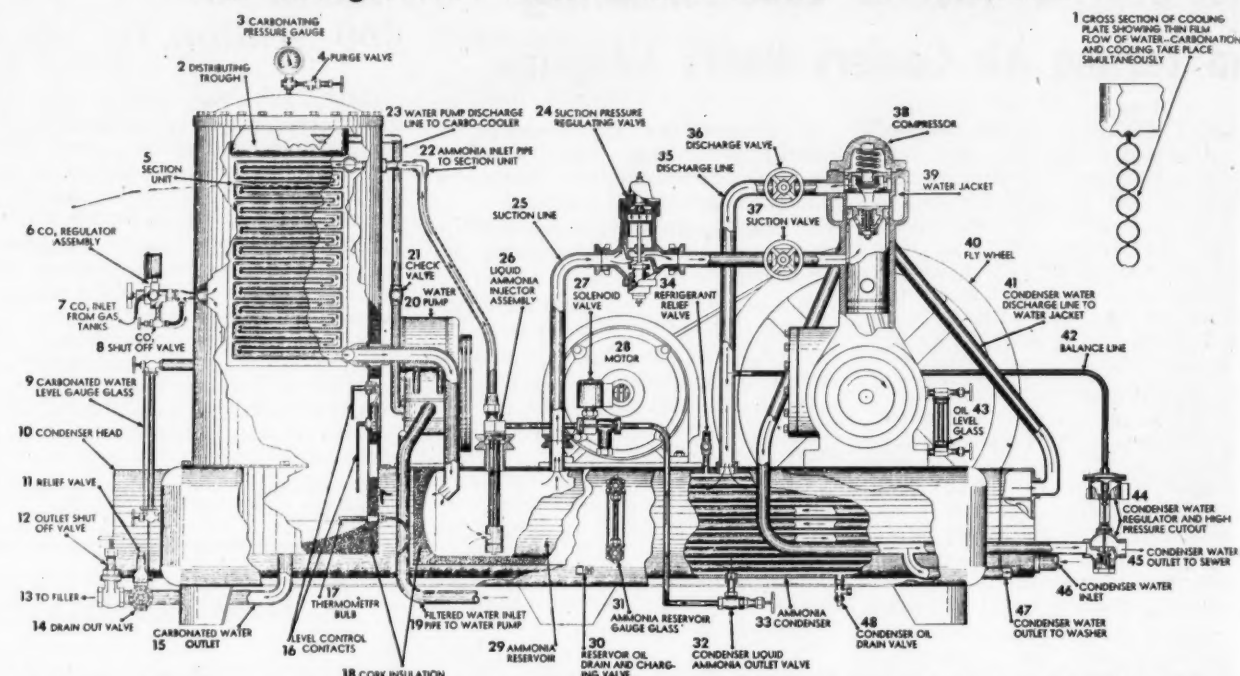
If you haven't a copy of Catalog R2, request one today.

No. 115

SUPERIOR VALVE & FITTINGS COMPANY
PITTSBURGH 26, PENNSYLVANIA

OFFICES IN PRINCIPAL CITIES • STOCKS: CHICAGO (6) • LOS ANGELES (15) • JOBBERS EVERYWHERE

This Refrigeration Plant Ends 'Drouth' on Okinawa



Using the principle of a milk aerator under pressure this "carbo-cooler" produced by the Mojonner company of Chicago produces 500 gallons of chilled, carbonated beverages an hour for thirsty members of the armed forces on Okinawa. A 25-hp. ammonia compressor supplies refrigeration—the operating cycle is explained in the story below.

Lehmkuhl Heads Sales For Dynamic Air

LOS ANGELES—Elmer Lehmkuhl is now sales manager of Dynamic Air Engineering, Inc., manufacturer of high-pressure, axial flow blowers, according to Harry Glascock, president.

Prior to joining this firm Mr. Lehmkuhl was with Propellair, Inc., as service manager for eight years.

'Flash' Cooling Used In Modern Bottling Plant Erected on Pacific Island Base

By W. Henry Knowlton

OKINAWA—Special—Thirsty GIs, sailors, and Marines on this island will soon have all the Coca Cola they can drink, according to Ray D. Spencer, civilian technician loaned to the Army by the Coca Cola Co. to construct a modern bottling plant equipped with the most modern type of refrigeration.

According to Mr. Spencer the plant will contain a battery of Mojonner "Carbo-Coolers" each capable of producing 500 gallons of the chilled, carbonated, bottled beverage every hour. These units are powered by Linde-Park 25-hp. ammonia compressors which produce about 18½ tons of refrigeration.

The Mojonner Carbo Cooler, illustrated on this page, is a new development in the beverage carbonating field. It utilizes "flash" cooling to facilitate the mixing and carbonation process. The fact that any liquid will "take" carbonation better, when chilled, is well known. The Carbo Cooler, by utilizing the principle of a milk aerator under pressure, performs the cooling and carbonating process in a single operation, eliminating the necessity for bulky and expensive chilled water storage tanks and pumping equipment.

As shown in Point 2 of the drawing, water and coca cola sirup are fed into a distributing trough, where the solutions are mixed before being fed down over the stainless steel tubes of the cooler. The liquids enter at "room" temperature (Quonset hut or tent on Okinawa) which is about 85° F. or 90° F. and are cooled to 35° F. and the mixture is then bottled.

The entire vessel is shown at left under pressure created by CO₂ gas entering the cylinder at points 6, 7, and 8. The chilled, carbonated liquid escapes to filler pipe (13) thence to the bottling machine.

The refrigeration cycle is clearly shown in the drawing. From the temperatures used it is obvious that the ammonia system is operated at considerably higher back pressure than is usual in a system of this type. The shell and tube condenser serves as the base of the entire apparatus, on which is mounted an ammonia compressor body of conventional design and a motor of the required horsepower. The unit is equipped with the latest type solenoid valve, refrigerant relief valve, suction valve, condenser water regulator, and high pressure cut out as shown.

Upper right of the drawing shows cross section (1) which is an end view of the cooling tubes where carbonation and cooling take place simultaneously.

It is difficult to realize the importance of water in a place like Okinawa. Surface water, used by the military is treated with chlorine to a point where it is not suitable for use in a carbonation plant. For this reason the Coca Cola plant will use an elaborate system of sand and lime filters to remove all dangerous matter from the water, including the "liver lutes" found in the fresh water that are dreaded by natives and Americans alike. The filtration plant assures a constant supply of fresh pure water for the plant.

According to Mr. Spencer similar plants will soon be constructed in Korea and Japan.



CAN YOU REALLY LAMINATE FABRICS AND RESINS INTO SHAPES?

YOU BET WE CAN: We make SHAPES exclusively . . . short or long runs—all kinds, colors, sizes—with all the strength, dielectric qualities, light weight and machinability of laminated sheets, rods and tubes.

SPECIALISTS in SHAPES laminated from resins and fabrics (glass, synthetic or cotton) to exacting needs of America's leading industrial engineers. Tell us your shape requirements. We probably can submit samples similar to your needs. Write to Andover Kent, New Brunswick, N. J.—TODAY!

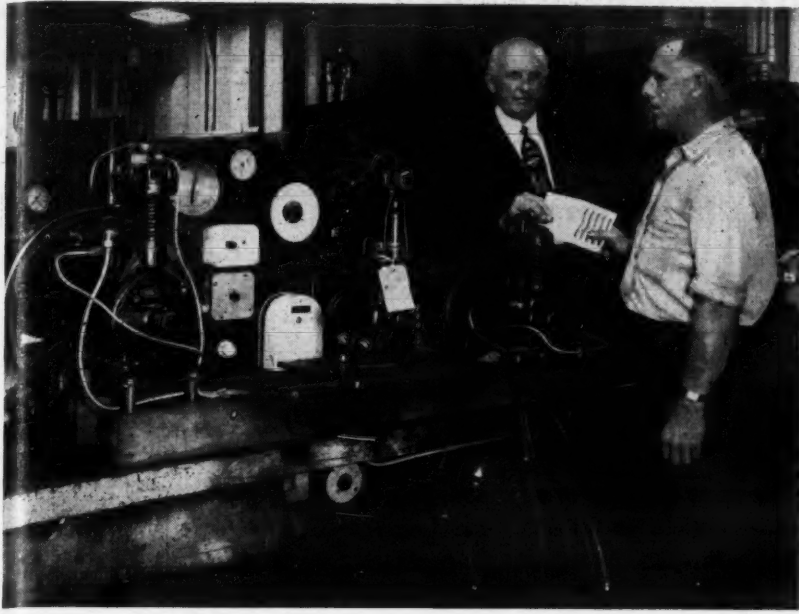
Andover Kent

YOUR BEST SOURCE FOR

Laminated Shapes

UNBREAKABLE • LIGHT • NON-ABSORBENT

This Is His Relief for Call-Back 'Headaches'



Clayton Van Wert, refrigeration repairman, accepts a war bond from George M. Hardy, vice president of Worcester County Electric Co., for winning the firm's suggestion award. At the same time, he casts a proud glance at his testing bench which helped him solve refrigerator motor and compressor ailments and which brought him the bond.

Motor-Compressor Testing Bench Cuts Down On Repeated Service Calls, Originator Finds

BOSTON—Take some stock or junk parts, mix well as directed, and you refrigeration repairmen will have a mechanical aspirin tablet that may give relief from chronic "headaches" caused by repeated calls to service maladjusted refrigerator motors and compressors.

This "tablet," conceived by a Worcester County Electric Co. refrigeration service man, Clayton Van Wert, is in the form of a testing bench which allows simulation of actual operating conditions. Mr. Van Wert's idea recently brought him a \$25 war bond as winner of the company's suggestion award.

Aware that short shop tests showed up only obvious errors in adjustment, Mr. Van Wert decided to work out some means of reproducing normal operating conditions and thus be assured that motors and compressors were properly repaired and adjusted before being sent out for reinstallation. His answer is the testing bench.

Essentially, the bench is composed of a large and small compressor mounted on the opposite ends of two rails and a steel plate for a motor-testing mount, the plate being adjustable to secure proper belt tension. Compressors are tested by means of a 1/4-hp. motor mounted under the bench.

The size of the motor determines whether one or both of the compressors are used. If both are in use, they are connected in parallel through a piping circuit which includes, among other things, a gas flow meter and head pressure gauge.

Belted to one of the compressors and connected to current source through an ammeter, the motor gets the desired load through air pressures being built up on the compressor. Adjustment of valves on the air circuit permits any load wanted.

To insure that motors will always start, they are tested under 50% and 100% overload. Motor loading is based on nameplate ampere rating.

In testing a compressor, it is placed on the bench and belted to the 1/4-hp. motor on the underside of the bench. After a running test to loosen it up, the compressor is then connected into the piping circuit with the gas flow meter connected to the suction side of the compressor.

Bleeding the circuit allows maintenance of a fixed load pressure as air is pumped through the gas flow meter. The amount of air (gas) the compressor will deliver is determined by checking its speed and taking a reading on the gas flow meter for a given time. This is then compared with the compressor rating.

A formula for finding out the rating, if unknown, of a compressor is given as:

$$V = \frac{\pi \times D^2 \times S \times N \times R}{4}$$

with V representing volume in cubic inches per minute; S, stroke in inches; D, diameter of cylinder; N, number of cylinders; R, r.p.m.; and π 3.1416.

It was explained that this formula gives a theoretical volume, rather than an actual one, due to certain losses. However, a satisfactory test can be made, it was suggested, by maintaining a head pressure of 40 lbs.

per square inch. A reading of 75% or better on the gas meter, as compared to the result of the formula, could then be considered good.

This test is said to show up a compressor that will pump against a high head but not handle much gas, a frequent occurrence on overhauled compressors.

Refrigerant gas was used in the piping circuit originally, but Mr. Van Wert soon discovered that tests could be made as well and easier with air.

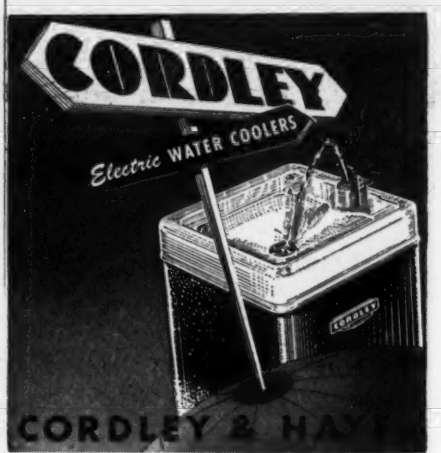
"The rig may look like a lot of bother to install and operate," Mr. Van Wert said, "but it pays off with less comebacks on motors and compressors, and this is a headache worth licking." It is claimed that call-backs have been practically eliminated by the bench, which can be duplicated in any service shop.

Pauling Heads Ilg's Tulsa Office, Eliotte to Detroit

CHICAGO—Recent sales appointments at Ilg Electric Ventilating Co. include that of R. E. Pauling as manager of the firm's Tulsa, Okla., office, and Marion A. Eliotte's appointment to the staff of the Detroit office, according to an announcement by P. D. Briggs, vice president in charge of sales.

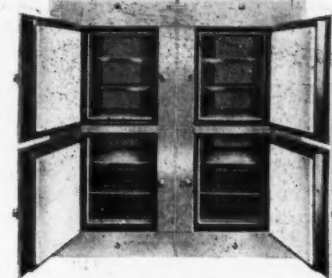
Prior to his appointment at Ilg, Mr. Pauling was traveling the Midwest for the Illinois Malleable Iron Co. of this city. He also served as president of the Oklahoma chapter of A.S.H.V.E.

Mr. Eliotte comes to Ilg from the Marine Products Co. where he was employed in sales engineering.



452 FOURTH AVE., NEW YORK, N. Y.
Specialists on drinking water equipment for 50 years

THE RESPONSE HAS BEEN TERRIFIC... WILSON ZEROSAFE



Wilson ZEROSAFE Farm Freezer
Model FF-60 (Cap. 60 cu. ft.)
Self-Contained Models:
Up to 25 cu. ft.
Sectional Models: Up to 100 cu. ft.

1. From 1939 up to the time government limitation became effective, Wilson Reach-In Farm Freezer production was doubled and redoubled to meet rapidly growing demands.
2. All of the experience gained in years of designing and manufacturing Wilson ZEROSAFE is going into the production of this equipment on a huge new production schedule when the "green light goes on."

WILSON REFRIGERATION, INC.

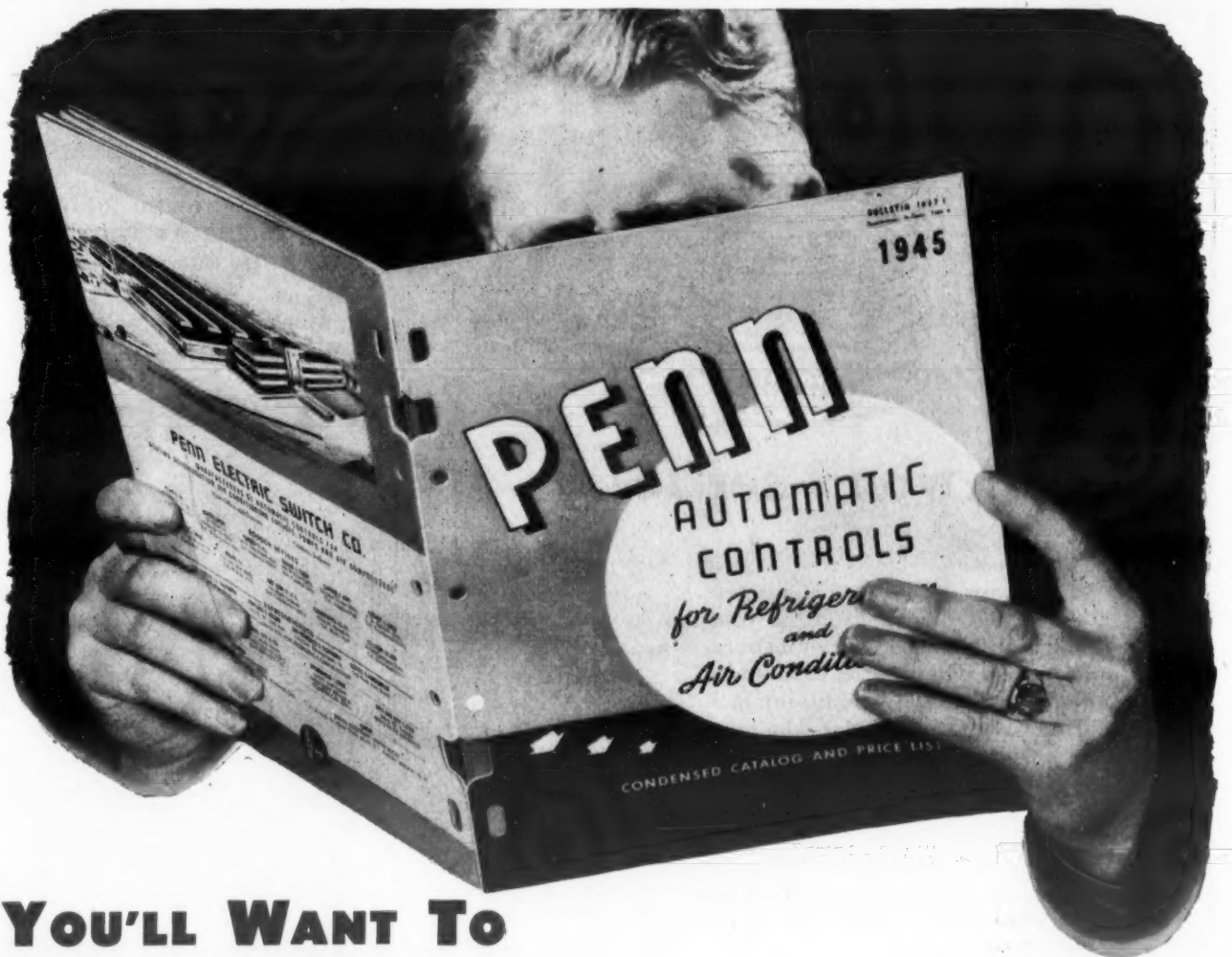
DIVISION WILSON CABINET CO.,

SMYRNA

DELAWARE

WILSON ALSO MAKES...

ZERO-FLOW and VERTI-COIL Milk Coolers
ZEROVAULT Walk-Ins for Frozen Food Storage
ZEROSAFE Reach-Ins for Storing and Dispensing Frozen Foods
NORMAL TEMPERATURE Walk-Ins & Reach-Ins

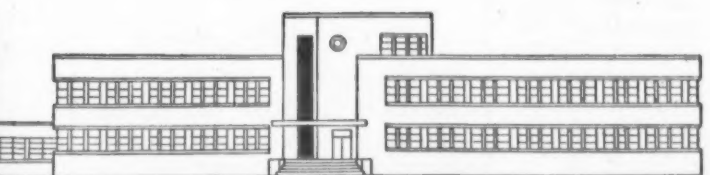


You'll Want To Read It, Too!

It has all the facts on Penn Automatic Controls

Here it is—PENN's new Condensed Catalog! It's packed with pertinent information about PENN Automatic Controls for Refrigeration and Air Conditioning. Complete with specifications, pictures and standard replacement parts, it gives you everything you want to know in a concise, easy-to-use manner. This 20-page book is conveniently indexed, too, so you can find the item in which you're interested at a moment's notice. If you haven't sent for your copy yet, a postcard request will bring one to you by return mail. Write Penn Electric Switch Co., Goshen, Ind. Export Division: 13 E. 40th Street, New York 16, U.S.A. In Canada: Powerlite Devices, Ltd., Toronto, Ontario.

PENN



AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

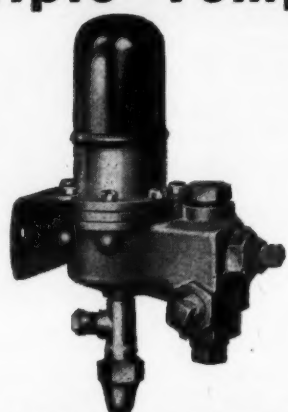
HUBBELL
YODER
REFRIGERATION PLATES
THE HUBBELL EVAPORATOR PLATE
Every square inch of surface is prime heat pick-up.
For Frozen Food Lockers, Freezer Cabinets, Milk Coolers, Fruit and Vegetable Counters, etc.
Write for complete information. It will pay you.
ENGINEERING SERVICE INC.
820 Standard Building • Cleveland, Ohio
Sole Agents for
THE YODER COMPANY, Fabricating Division
MANUFACTURERS

4 to \$49.50
\$15 to \$119
\$50 to \$149
\$75 to \$350
\$1.39 laid
CARPET CO.
WORTH SIDE
Cottage Grove,
Ill.
Write for
FREE CATALOG
IF THE PART
YOU WANT
can be had...you can get it at..
**REFRIGERATION
PARTS HEADQUARTERS**
Write for Catalog
THE HARRY ALTER CO.
1728 S. Michigan Ave. Chicago, 16, Ill. Two Big Warehouses to Serve You 134 Lafayette St. New York, 13, N.Y.

SNAP ACTION VALVES for Multiple Temperature

Adjustable
from 20" of
vacuum to 63
lbs. pressure

Proven in
Performance



Differential
7 lbs. minimum
to 29 lbs. max.

Free from
bellows strain

Here is a marvelous precision valve designed for systems with more than one coil, operated from the same compressor. Any variety of units such as ice cream cabinets, soda fountains, back bars, water coolers, candy counters, beer coils, storage rooms, etc., may be connected to a single compressor unit by the use of an Aminco Snap Action Valve.

This means more today than ever before, what with the difficulties experienced by the serviceman in satisfying his trade with "too little" material for the work to be done.

Aminco Snap Action Valves are not an experiment. They have proven their worth in years of actual service and are doubly useful under today's conditions when one piece of equipment must do the work of several.

May be used with any refrigerant except ammonia. For flooded as well as dry gas types or any combination of either.

As always, our company is definitely interested in the survival of the refrigeration industry and is doing its utmost to cooperate with established operators.

AMERICAN INJECTOR COMPANY
1481 Fourteenth Avenue DETROIT 16, MICHIGAN

Van D. Clothier, 1015 E. 16th St., Los Angeles, Calif.
George I. Boone, 739 G. M. Bldg., 1775 Broadway, New York 19, N. Y.
William H. Cody, 2nd Unit, 10th Floor, Santa Fe Bldg., Dallas, Texas
Export: Borg-Warner International Corp., 310 S. Michigan Ave., Chicago, Ill.

Q. Why is ZEROCEL like a spring?



A. It won't settle!

ONE reason why Zerocel's your best insulation buy is because it's resilient. As proved by tests made by Pittsburgh Testing Laboratory, it just won't settle, even under severe vibration. In addition, inch for inch, Zerocel is one of the most efficient insulators on the market, having a conductivity or "K" factor of 0.24 Btu at 60° F. mean temperature. Because of its low cost, Zerocel may be installed much thicker for the same or less money, reducing the refrigeration load and the size of the compressor needed.

And Zerocel is fireproof (important when placing fire insurance), waterproof (shows only surface wetting even when submerged in water) and inorganic (will not harbor vermin, absorb odors or decay). For better insulation at lower cost, insist on Gold Bond Zerocel Rock Wool Insulation.

Made by the makers of famous
GOLD BOND ROCK WOOL HOME INSULATION
For years, Gold Bond Rock Wool Home Insulation has been the choice of architects, builders and home owners. Folks know it as awfully good insulation. Accordingly, it's like meeting an old friend when they see the Gold Bond-Zerocel stamp on insulated products. Inquire about Zerocel stickers for appliances, and job signs for installations. They're free!

Zerocel is manufactured to U. S. Dept. of Commerce Standard CS-105-43. Samples and literature on request.

BUILD BETTER WITH
GOLD BOND
ZEROCCEL
ROCK WOOL INSULATION

INDUSTRIAL DIVISION, NATIONAL GYPSUM COMPANY
GENERAL OFFICES, BUFFALO 2, NEW YORK
Branch Offices: New York City, Boston, Philadelphia, Washington, D. C., Chicago, St. Louis, Los Angeles, Dallas, Cincinnati, Luckey, Ohio.

Refrigeration Problems And Their Solution

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration
and Air Conditioning
Division, Perfex Corp.

Recording Suction Pressure Gauge (2)

A CHART ON AN INSPECTION CALL

Service man B received as his first call of the day an inspection call on a frozen food storage room that had been recently installed by another man and put into operation only the day before. It was equipped with plate coils fed by two thermostatic expansion valves, using "Freon-12," and controlled by a low-pressure control. The user had reported that the temperature was 12° F. although it was supposed to average about 0°.

"B" arrived a little after seven and found the condensing unit running, one bank of plate coils almost entirely active, the other only about two thirds active. While he was there the unit started again, ran a few minutes and stopped only to start again almost at once. He immediately suspected moisture in the system but that didn't seem to entirely account for the short cycles with the evaporators both fairly active.

He decided to put on his recording suction pressure gauge for a few hours to see how it was cycling, the character of the cycle, and the off and on settings of the pressure control. He put on the recorder at 7:30 and left for another service call.

CHARTS SHOWED SHORT CYCLING AT WIDE DIFFERENTIAL

Examining the chart, shown in Fig. 3, upon his return about an hour

and a half later he found that the unit was short cycling on a wide suction pressure differential. He decided that there was some moisture in the system, so he put a silica gel dehydrator in the liquid line.

The chart showed that the pressure control was set 13 p.s.i. cut-in, 4½ in. out. This seemed a rather wide differential and indicated an out-of-balance condition between the capacity of the condensing unit and of the evaporator. This wide differential had evidently been set in order to try to keep the condensing unit on the line.

WHAT THE SYMPTOMS MEANT

The service man concluded that the capacity of the condensing unit should be reduced so he put on a motor pulley having approximately 20% smaller diameter and at the same time reset the pressure control to a shorter differential cutting in at 11 p.s.i. and on at just above zero pounds gauge. Also he warmed up the two thermostatic expansion valves and again started the condensing unit at about 9:25.

By this time the suction pressure was up to 19 p.s.i., which immediately dropped to 15 p.s.i. as the thermostatic expansion valves were the gas-charged type for a maximum suction pressure of 15 p.s.i. The suction pressure finally pulled down to cut-off at just above zero p.s.i.

There may have been some moisture in the system, but the expansion valves were not adjusted for full activity of the evaporators so he gradually opened them a little (decreased the superheat setting) which lengthened the cycles until by noon when he left them they seemed adjusted about right.

HOW IT SHOULD HAVE RUN

The service man was busy on another job that afternoon, so he didn't get back until on his way in to the shop about 6 o'clock. The chart showed excellent operation and cycling all afternoon, and the temperature was down to -1° F. So he took off the recording gauge and went on in to the shop well satisfied with the operation. He had spent only about three hours in diagnosing and correcting a job that had not been properly balanced and adjusted when it was first installed.

ANALYSIS OF A CHART ON A MULTIPLE JOB

Fig. 4 shows a chart from a suction pressure recording gauge on an installation of one "F-12" condensing unit on two 6 ft. x 6 ft. walk-in refrigerators, one for meat and kept at about 32°, and the other for fruits and vegetables kept at about 45°. Each cooler was equipped with a blower type evaporator with the fan running continuously.

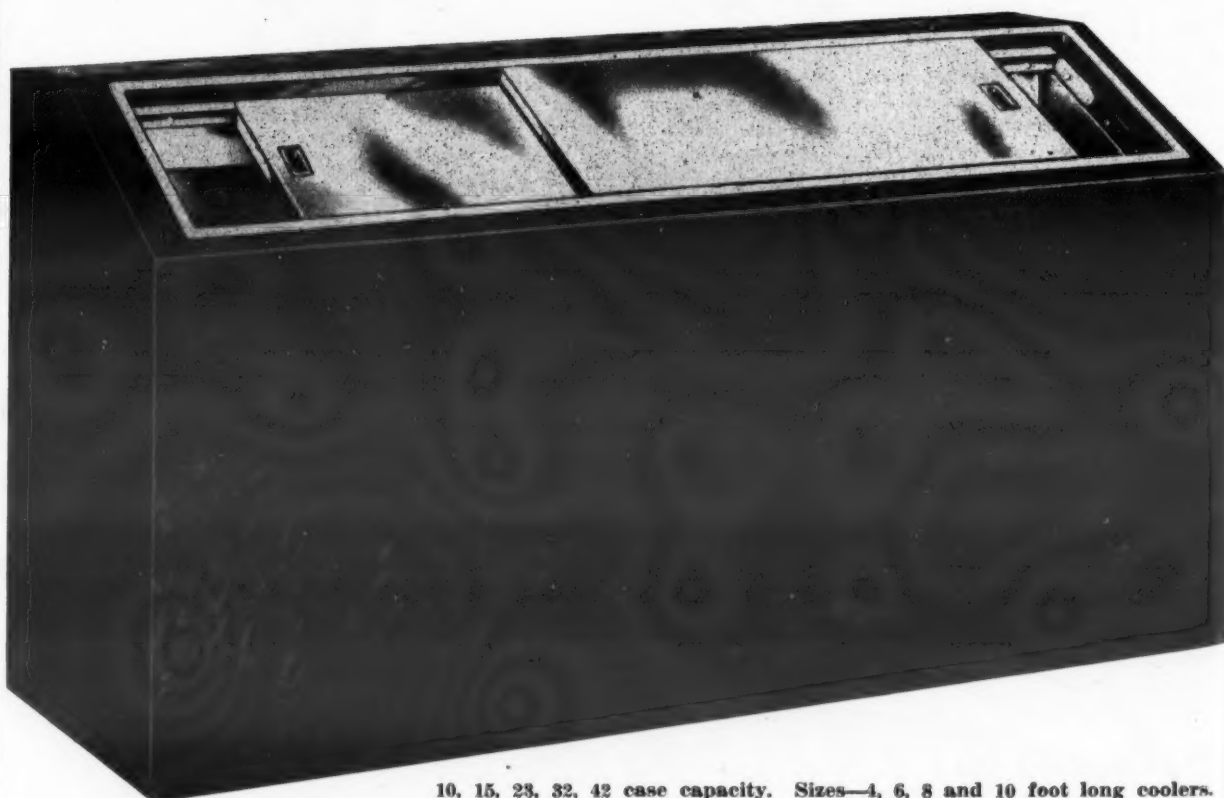
In the liquid line to the fruit and vegetable cooler was a solenoid valve controlled by a box thermostat in the fruit and vegetable cooler. The condensing unit was pressure controlled set 35 p.s.i. cut-in, 15 p.s.i. cut-out.

The suction pressure recording gauge was put on at about 6:38 a.m., apparently just after the condensing unit had stopped. The suction pressure rose gradually until it hit 30 p.s.i., which corresponds to 32° F., at which the evaporator starts to defrost. The cut-in setting of the pressure control was 35 p.s.i. in order

(Concluded on next page)

A PROFITABLE FRANCHISE

Fast Cooling Dry Beverage Coolers



10, 15, 23, 32, 42 case capacity. Sizes—4, 6, 8 and 10 foot long coolers.

Attention: Dealers and Distributors
FOR IMMEDIATE DELIVERY

Both remote and self-contained models of beverage coolers and streamlined freezers. Also condensing units from ¼ hp. to 1 hp. at low prices.

For full details write or wire

AMERICAN COMMERCIAL EQUIPMENT CO.

Las Vegas, Nevada (general offices)

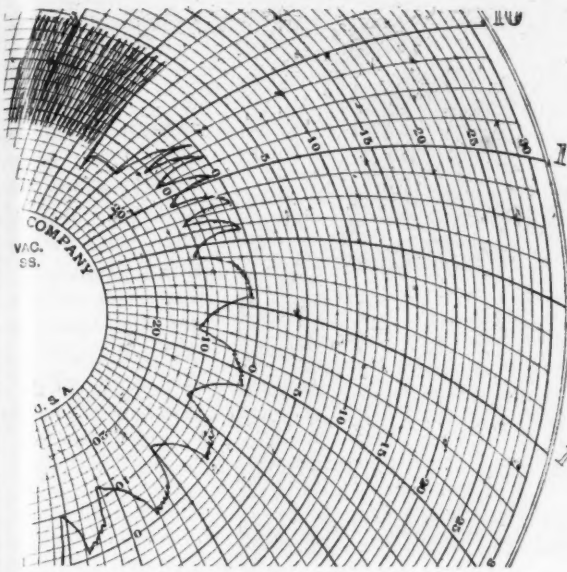
or

AMERICAN COMMERCIAL SALES CO.

P.O. Box 6664, Cleveland, Ohio (eastern and midwest sales agency)

Next Showing Will Be Freezers — Super Quality Products

Fig. 3—How Short Cycling Appears on Chart



This chart from a suction pressure recording compound gauge shows graphically the short cycling (upper left) of a unit which had not been properly balanced and adjusted when installed. After correction the cycle became normal, as shown.

Recording Gauge--

(Concluded from preceding page)

to obtain a full defrost of the evaporators.

At just before 7:30 the temperature of the evaporator in the meat cooler went above 32° and the evaporator began to defrost. By the time it had entirely defrosted the suction pressure had risen to 35 p.s.i. where the pressure control started the condensing unit.

The suction pressure dropped rapidly to 20 p.s.i. before the thermostatic expansion valve on the meat cooler evaporator opened. The unit ran on the meat cooler only, until the pressure was pulled down to 15 p.s.i., when the pressure control cut out and stopped the unit.

OPERATION WITH BOTH COOLERS ON

After about 40 minutes the suction pressure had again built up to 35 p.s.i., indicating the meat cooler was again calling for refrigeration. The condensing unit again started, the suction pressure pulled down to about 20 p.s.i. before the thermostatic expansion valve opened and the condensing unit ran on the meat cooler evaporator alone again until about 8:35. Then the thermostat in the fruit and vegetable cooler closed (called for refrigeration) opening the solenoid valve in the branch liquid line to the evaporator in the fruit and vegetable cooler.

The refrigerant rushed into the warm evaporator of the fruit and vegetable cooler raising the suction pressure at the compressor (and at

the recording suction pressure gauge connected to the suction service valve) to 26 p.s.i.

For about 15 minutes the condensing unit ran on both evaporators until 8:50, when the thermostat in the vegetable cooler closed, and as the meat cooler was sufficiently cooled by that time the condensing unit quickly pulled down to cut-off pressure of 15 p.s.i. at which the pressure control opened and stopped the condensing unit.

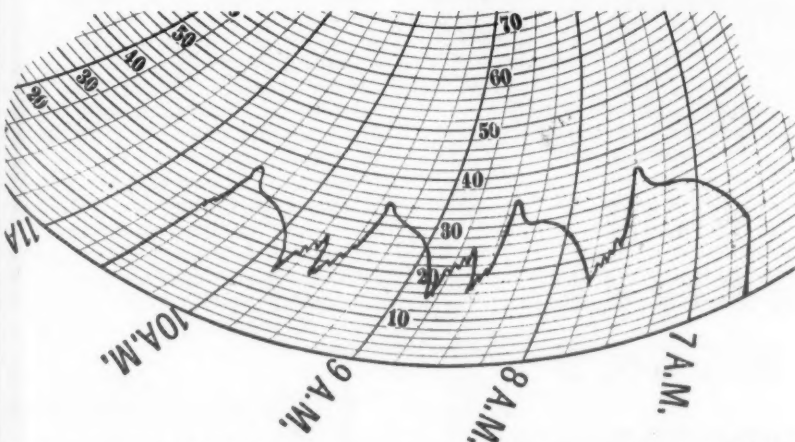
Very much the same thing happened on the next cycle, except that the condensing unit was almost ready to cut off at 16 p.s.i. on the meat cooler only when the thermostat in the fruit and vegetable cooler opened and brought the suction pressure back up to 26 p.s.i. Again the thermostatic expansion valve opened when the suction pressure was about 20 p.s.i. and the suction pressure quickly pulled down to 15 p.s.i. and cut off the condensing unit.

This was normal operation for this type system, a two-temperature job using a pressure control to obtain temperature control of the meat cooler and to cut the condensing off and using a combination thermostat and liquid line solenoid valve to obtain temperature control of the higher temperature cooler holding fruits and vegetables.

A USEFUL AND PROFITABLE TOOL

Many other instances of the usefulness of a recording suction pressure gauge will suggest themselves to the service man, who, the longer he uses one, the less willing he will be to part with one of his most useful and profitable tools.

Fig. 4—Chart on Multiple Installation



Suction pressure chart from a two-evaporator, two-temperature installation. In this installation the high temperature fruit and vegetable room is thermostatically controlled, and the lower temperature meat room is controlled by a pressure control.



TYLER'S TOPS

FOR PROFIT

YOU can go places with Tyler in the years ahead. The growing Tyler line meets today's—and tomorrow's—demand for self-service, frozen foods display, better design, better construction, better value! Write for complete-line catalog today! Tyler Fixture Corp., Niles, Michigan.

TYLER

TYLER FROZEN FOODS DISPLAY CASE—open, self-service, wall-type!

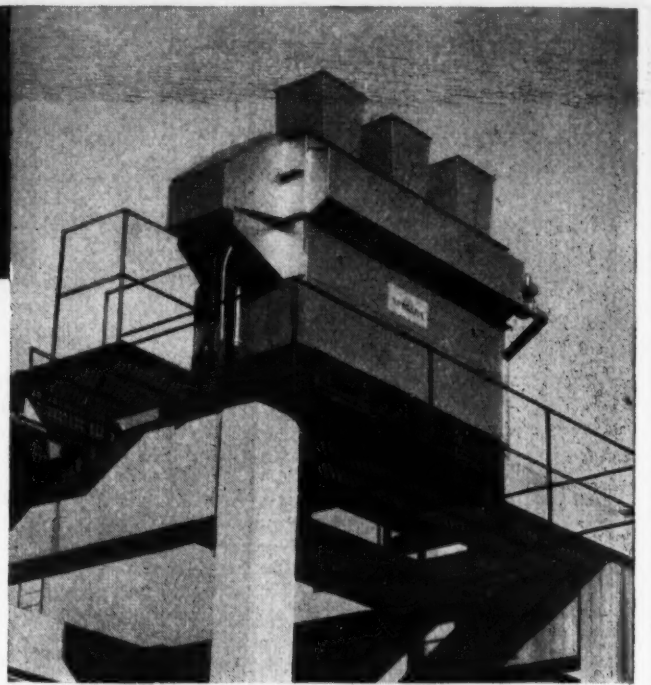
NIAGARA Duo-Pass

AERO CONDENSER

PERMANENTLY INCREASES YOUR PRODUCTION CAPACITY!

Only the NIAGARA Aero CONDENSER has the "Duo-Pass" pre-cooling method that prevents scale deposits on condensing coils, assuring full capacity always—eliminating all the troubles caused by clogged-up, inefficient condensers.

The NIAGARA Aero CONDENSER, with coils that are always clean, uses the extra heat transfer of evaporation with outdoor air as the cooling medium to provide excess capacity, increasing your production in refrigerated products, effecting savings in power. The high cost of condensing water is also saved, quickly repaying the installation cost.



NIAGARA BLOWER COMPANY

Over 30 Years in Industrial Air Engineering
Dept. AC-115 6 E. 45th St., New York 17, N. Y.
Field Engineering Offices in Principal Cities

Patented

Write for descriptive Bulletin No. 91

NO FROST COOLING SYSTEMS

NIAGARA

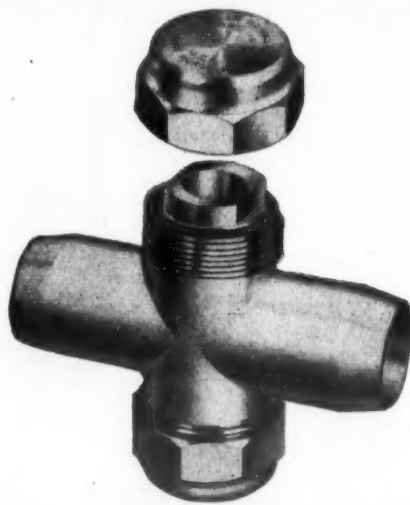
AIR ENGINEERING EQUIPMENT



Buy VICTORY Bonds



MUELLER BRASS CO. LIQUID INDICATORS WILL NOT LEAK



DOUBLE PORT LIQUID INDICATOR

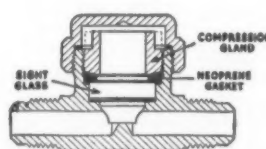


WITH SEAL CAP



The improved design of our liquid indicators is effective assurance against refrigerant leakage around the sight glass. The sight glass is sealed into the forged brass body by a heavy Neoprene gasket which, in turn, is compressed by a packing gland, which forces the pliable gasket along the sides of the glass and produces a perfect seal.

Mueller Brass Co. Liquid Indicators are made in a complete range of styles and sizes. The



seal cap and open port type may be installed where light conditions are favorable. Where the light is poor, we recommend the use of our double port liquid indicators

illustrated here. By flashing a light through one port, the exact condition of the refrigerant may be determined through the other port.

The new design of the compression gland permits the use of standard wrenches for tightening.

NOTE: All models of Mueller Brass Co. filters and line strainers may be obtained with female flare connections on one end. This makes it possible to assemble any desired filter to a liquid indicator for installation in the liquid line of the system.

MUELLER BRASS CO.

PORT HURON, MICHIGAN

WRITE FOR CATALOG



Do to the paper shortage we will not issue a catalog in 1945

SERVICE PARTS CO.
2511 Lake St. Melrose Park, Ill.

What's New

Thor Sink Unit Washes Both Clothes and Dishes

CHICAGO—Design and operating details of the Thor combination dish-washer, clotheswasher, and sink combination unit have recently been revealed by the Hurley Machine Division of Electric Household Utilities Corp.

Made of white-enameled steel with a black linoleum top, stainless steel trim, and containing a bowl of white porcelain enamel, the sink unit stands 36 inches high, 54 inches long, and is 25 inches deep. Beneath the sink bowl is storage space where either the clothes or dishwasher tubs may be kept when not in use.

Installed under the hinged drain board of the sink unit is the clothes-dishwasher combination which, by a switch of tubs, will wash either the

dishes or laundry.

Washing of clothes and dishes is done in two separate and interchangeable sets of tubs and accessories. The change is made by lifting out one tub and setting the other in place.

The quantity and temperature of the water for the washer may be regulated in the sink faucets and then by means of a button control, switched to the washer tub. The dial control for the washer which automatically controls washing, rinsing, and drying is located on the back splash panel of the sink.

Clothes washer part of the machine is featured by agitator washing action, and a "deep power" overflow rinse. After the washing action has been completed, the machine spins out the soapy water and subjects the clothes to two cool-water rinses.

First rinse is a spin rinse, a one-minute operation which forces clear water through the clothes by centrifugal pressure. This is followed by the "deep rinse," a power-overflow action lasting four minutes. Following the final rinse, the tub spins the clothes to a damp-dry condition in eight minutes. The washer has a capacity of 8 pounds at a time.

The dishwasher section is fitted with compartmented wire baskets that are big enough to hold a complete service for six people. The housewife, after loading the dishes, adds a detergent, and the dishes are washed by high-speed water action, then rinsed and "fanned" dry.

This Sink Handles Clothes as Well as Dishes

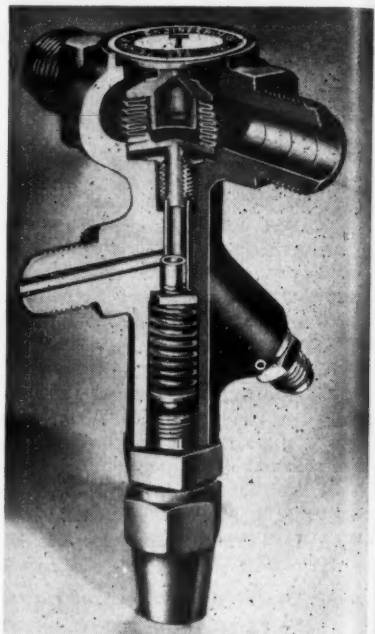


An automatic clothes washer and dish-washer have been combined in this Thor sink, and the Hurley company is said to be considering other special attachments, including a potato peeler, a churn, and an ice cream freezer.

Tenney Expansion Valve Uses No Feeler Bulb

NEWARK, N. J.—Several "radical" features, including elimination of a feeler bulb, are claimed for the new thermostatic expansion valve now being marketed by Tenney Engineering, Inc., manufacturer of temperatures and humidity control equipment. Known as Model TS-1, the valve is designed for standard commercial use.

The valve is described as being easily dismantled and reassembled for cleaning and as permitting "extremely close" super heat control. It makes unnecessary special "charging" and



"cross charging," use of an external equalizer, sizing the valve to the job, and stem packing, the firm states.

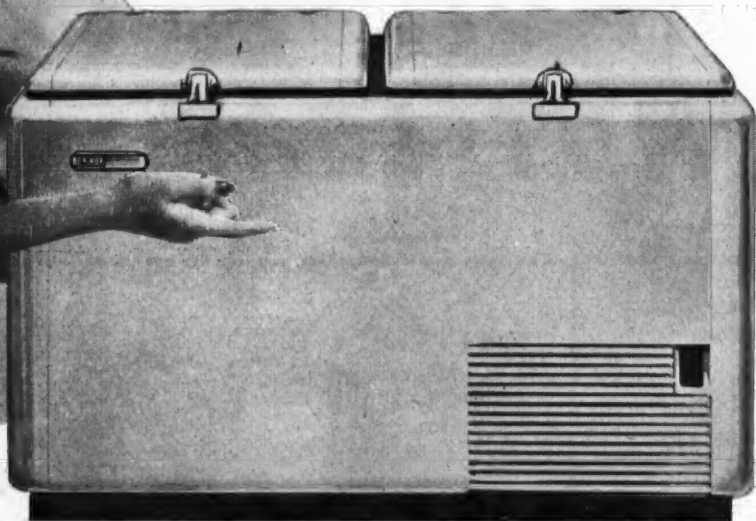
Explaining the absence of a feeler bulb, Tenney pictures the valve as responding "instantaneously" to changes in suction vapor conditions and as being unaffected by box temperatures, entering warm air or warm suction lines. "Hunting," prevented by adapting the valve to the job, is done away with, the concern says, through absence of any appreciable time lag in control. The valve is said to close completely above a definite evaporative pressure.

"No special installation is required to prevent loss of control caused by condensing of bulb control fluid in the valve body," the firm states, claiming the valve "has all the advantages of a 'gas charged' and 'liquid charged' valve, with none of the disadvantages of either." Use of an external equalizer is made unnecessary, Tenney says, because compensation for pressure drop in evaporator or distributor has been designed into the valve itself. Needle and seal design are described as novel.

The valve is said to be particularly adaptable to evaporators with forced air, small tubes, short passes and distributor header combinations and for small evaporators and close coupled coil and machine combinations. Tenney expects soon to announce other valve models for air conditioning and low temperature use.

THIS NEW BEN-HUR FARM and HOME FREEZER BELONGS IN ALL YOUR

Customers' Modern Home Planning



TODAY, in communities all over America, dealers are placing advance orders with BEN-HUR Distributors for the new Ben-Hur Farm and Home Freezer. They know that many of the 900,000 annual new home builders, will specify in their plans the health-preserving, budget-saving advantage of home food freezing. Each of these forward-looking dealers is preparing to benefit, profit-wise, by this nation-wide sales opportunity.

The engineering "know-how" and skilled craftsmanship acquired during more than 33 years of producing quality products will be built into each of these amazingly efficient BEN-HUR Farm and Home Freezers. All of the advanced performance features developed by BEN-HUR engineers — plus all that is best in cabinet design, construction, and styling — will characterize the BEN-HUR Line. Every unit soundly, durably built — properly, lastingly insulated — laboratory-tested under all service conditions . . . A complete range of sizes for every family need, city or rural.

Your Profits and your CUSTOMER-PRESTIGE will increase with every Ben-Hur Farm and Home Freezer you sell. Write us at once about the Ben-Hur Dealerships still available.

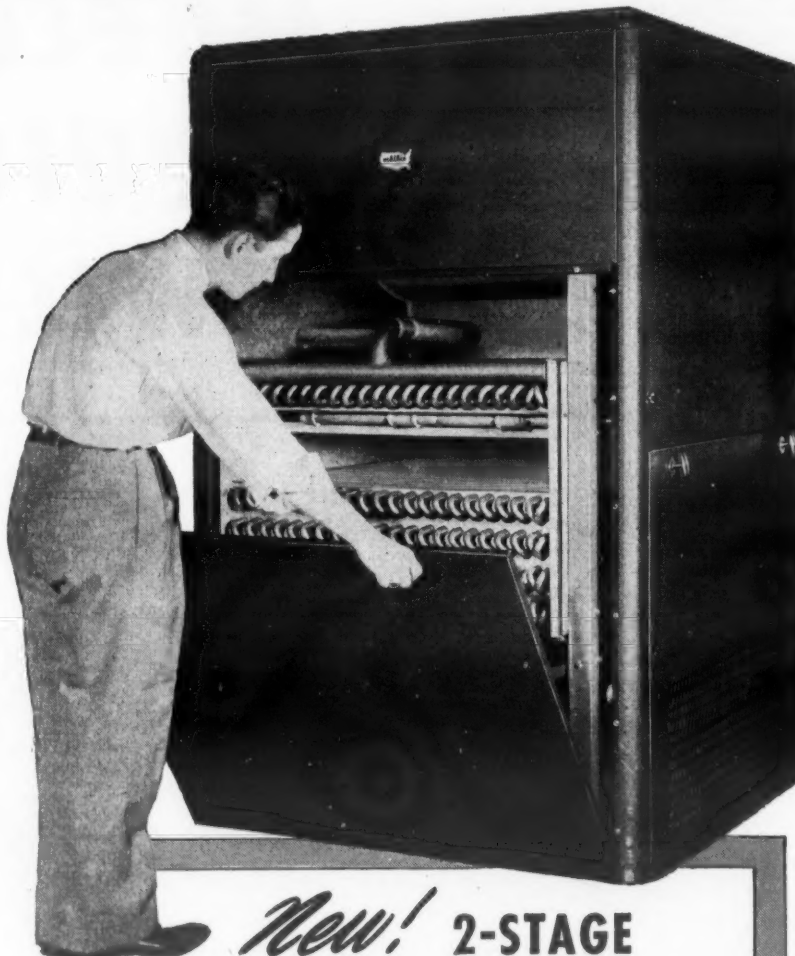
BEN-HUR MFG. CO.

324 East Keefe Avenue • Milwaukee 12, Wisconsin

Continuous Manufacturing Since 1911

BEN-HUR

FARM & HOME FREEZERS



New! 2-STAGE EVAPORATIVE CONDENSERS

● The usAIRco 2-Stage Evaporative Condensers provide new economy and efficiency in the condensing of refrigerating gases.

The condensing coils are 2-stage; the first stage (primary coils) removes the sensible superheat from the gas. These primary coils are bare tubes and made easily accessible so that deposits from evaporated water on the high temperature coils may be readily removed. The secondary coils remove the latent heat from the gas and condenses the refrigerant to a liquid. These coils are of the finned tube type for maximum efficiency and economy in cooling the gas. (Patent has been applied for on this new method of condensing gases.)

usAIRco 2-Stage Evaporative Condensers are receiving wide enthusiastic acceptance by air conditioning and refrigerating engineers for use wherever water is not excessively hard. You'll want to use them on your next job—write for Bulletin R-EC-100 today!



UNITED STATES AIR CONDITIONING CORPORATION

Manufacturers of a Complete Line of Air Conditioning Equipment

NORTHWESTERN TERMINAL

MINNEAPOLIS 13, MINNESOTA

AUDELS REFRIGERATION and AIR CONDITIONING GUIDE

JUST OUT! 4 Books in One!

Covering:
1. Basic Principles of Refrigeration
2. Special Refrigeration Systems
3. Commercial and Industrial Refrigeration
4. Air Conditioning Systems

A gold mine of essential information for ENGINEERS, USERS AND SERVICEMEN. Here you have at your fingers' ends a Complete Library in ONE VOLUME, the necessary data you have been looking for on: MODERN UNITS, SYSTEMS AND MACHINERY REFRIGERANTS, REFRIGERATION COOLERS & Air Conditioning Systems.

ANSWERS YOUR QUESTIONS. 1280 Pages, 46 Chapters all Fully Illustrated & Indexed for Ready Reference.

4 COMPLETE • PAY ONLY \$1 A MONTH. Get This Information for Yourself, Mail Coupon Today. No Obligation Unless Satisfied, ASK TO SEE IT.

AUDEL Publishers, 49 W. 23 St., N. Y. 10

MAIL AUDELS NEW REFRIGERATION GUIDE for examination. If O.K., I will send you \$1.00 and remit \$1 monthly until price of \$4 is paid. Otherwise I will return it.

Name _____

Address _____

Occupation _____

Employed by _____

Book for Vets --

(Concluded from Page 1, Column 2)

lieutenant in the U. S. Naval Reserve. The booklet begins by describing, clearly and simply, the scope of the refrigeration industry—particularly with respect to commercial and industrial applications. It also explains that air conditioning is not just the science of keeping you comfortable, but that it, too, has many uses in commerce and industry.

Explanation is also made of the refrigeration product—the point being emphasized that it is an assembly of many parts and pieces.

An "organization chart" of the industry is then presented to show the type of jobs that exist in the manufacturer's organization (office, production, and engineering), and in distribution, sales, installation, and service. The various types of jobs in each phase of the industry's activity are listed, and briefly described.

Particular attention is given to installation and service. For anyone with a natural mechanical bent and an ability to learn, the service branch of the industry offers opportunity not only for service but also for sales, says the booklet, this type of work affording a good "overall" view of the industry.

Training courses for work in refrigeration and air conditioning are discussed, and a partial list of state and public institutions that offer some courses in refrigeration and air conditioning.

Sources of suggested text and other reading material on the subject are given, and the member companies of the association are listed.

Headquarters of the Air Conditioning & Refrigerating Machinery Association are in the Southern Building, Washington 5, D. C.

Seiberling Ready With Several Appliances

AKRON, Ohio — Several electrical appliances, including farm and home freezers, are among a variety of products due for immediate public introduction by Seiberling Rubber Co.

In addition to the freezers, Seiberling is marketing toasters, irons, mixers, and household fans with inauguration of the largest expansion program in its history, officials said. It is understood that the company is contemplating addition of refrigerators, washing machines, and other major appliances to its line in the future.

Seiberling's large-scale merchandising diversification program also takes in the sale of several types of radios, combination radio-phonographs, battery-powered sets for farms, wheel goods, auto accessories, and other hard goods items.

Most of the appliances will be manufactured under Seiberling's own brand name, as yet undetermined. The company declined to identify the manufacturers of the appliances.

D. B. Sayre has been appointed by Col. J. L. Cochran, vice president in charge of sales, to manage the new merchandising department.

Distribution of the newly added products will be made through the firm's own branches and warehouses and through its independent distributors.

G-E Prices --

(Concluded from Page 1, Column 5)

in the hands of every dealer in a matter of days. G-E's lowest-priced range, the Leader, will retail at \$116.95; the medium-priced Airliner at \$177.75; and the deluxe Stratoliner at \$259.75. Mr. Sweeney described these figures as "the same prices that were in effect in 1942."

Incorporated in the ranges are several improvements, mainly in the form of material substitutions, the company said. Aluminum has replaced the porcelain used in thrift cooker pans, unit pans and economizers in 1942 models. Synthetic finishes have given way to bright ones and Calrod bake units have replaced the open type in 1942 ovens.

Some stores have already received ranges but they will not be available to all consumers until about the first of the year, Mr. Sweeney estimated.

In line with G-E's recently announced policy, the prices are the same throughout the nation. Figures include cost of delivery and the federal excise tax. State and local taxes are not included because of their wide variance and range prices are exclusive of installation costs for the same reason.

Mr. Sweeney said the refrigerators and ranges are all being built to prewar standards.

Kalamazoo --

(Concluded from Page 1, Column 4)

Under Kalamazoo's new distribution program, its 285 prewar retail stores will be supplemented by a proposed net work of 500 franchised dealers and by department stores, Mr. Blakeslee said. For the past 45 years, Kalamazoo has sold only by direct mail and through factory owned stores.

Mr. Blakeslee stated that the company has earmarked more than \$2,500,000 for immediate retooling and redesigning of the production line. Production plans, he said, call for a stove or furnace unit coming off the assembly line at the rate of one every 20 seconds.

Refresher courses in store organization, merchandising, advertising, accounting, and sales methods will make up a two-week sales training clinic to be conducted at the plant for dealers. A special traveling sales-training staff will train retail salesmen in the store. Upon dealers' requests, the company will set up an accounting method for checking profit and loss.

ASHVE Meeting --

(Concluded from Page 1, Column 3)

ley, Calif.; for second vice president—G. L. Tuve, head, department of mechanical engineering, Case School of Applied Science, Cleveland; for treasurer—J. F. Collins, Jr., secretary-treasurer, National District Heating Association, Pittsburgh.

Those nominated to serve as members of council for three-year term are: Earl G. Carrier, branch manager, Carrier Corp., Boston; F. W. Hutchinson, professor of mechanical engineering, Purdue University, Lafayette, Ind.; R. A. Sherman, supervisor, fuels division, Battelle Memorial Institute, Columbus, Ohio; and M. S. Wunderlich, general sales manager, Insulite Division, Minnesota & Ontario Paper Co., Minneapolis.

Members nominated to serve for a three-year term on the committee on research are: L. N. Hunter, vice president, National Radiator Co., Johnstown, Pa.; C. O. Mackey, professor of heat-power engineering, Cornell University, Ithaca, N. Y.; R. D. Madison, research engineer, Buffalo Forge Co., Buffalo; Prof. L. G. Miller, head, mechanical engineering department, Michigan State College, East Lansing, Mich.; and L. P. Saunders, chief engineer, research engineering, Harrison Radiator Division, General Motors Corp.



New M&E Unit Coolers

FOR MEATS, PROVISIONS, AND ALL ABOVE ZERO APPLICATIONS

Designed to eliminate many of the common faults due to old style cabinet cooling methods. Features include: modulated cooled air circulation. More uniform spot temperatures. High relative humidity with minimum of dehydration. Virtually eliminates water drop and sliming of foods. Data sheet on request.

MERCHANT & EVANS CO.

2035 WASHINGTON AVENUE, PHILA. 46, PA.

PIONEER MANUFACTURERS OF FIN-TUBE PRODUCTS

AMERICAN RAILROADS ARE

On Their Toes



THE "PENNSY" USES SUNROC

THE PENNSYLVANIA RAILROAD is burdened with essential traffic. Minutes count. Efficiency counts. The morale of its highly trained personnel counts. That's why the road has seen to it that there are electric water coolers close at hand in stations, roundhouses, offices, to which busy workers may turn for the lift of a refreshing drink of cool water.

Many other leaders in modern business and industry choose Sunroc Water Coolers on their record of trouble-free reliability and low operating-cost, over many years of dependable service.

Sunroc specializes in water coolers. There is nothing finer on the market today. Various Sunroc models are available now, to supply the urgent demand for cool drinking-water wherever people assemble, or are employed. Write for the Sunroc story. Dep't ACRN-11, Sunroc Refrigeration Company, Glen Riddle, Pa.

"There's nothing like a cool drink of water!"



The importance of cool drinking-water to the efficiency and morale of their employees and the satisfaction of their customers is fully appreciated by America's great railway systems. Many—as well as business in general and the United States Government — choose Sunroc Water Coolers.

In supplying this overwhelming demand, the Sunroc dealer is equipped with a full range of Sunroc models. He is backed by national advertising, powerful merchandising, and extensive field service.

Post-war is full of promise for you if you are qualified to use a Sunroc franchise to full advantage. Get details of the Sunroc product and proposition by mailing the coupon today. Sunroc Refrigeration Company, Glen Riddle, Pa.



"There's nothing like a cool drink of water!"

SUNROC

Water Coolers

GLEN RIDDLE, PA.

SUNROC REFRIGERATION COMPANY
Glen Riddle, Pa.

Gentlemen:
Please send me full particulars about Sunroc Water Coolers, and the story of "One Product, One Price, One Policy."

Name _____
Street _____
City and State _____

I am now a water cooler dealer
I am not a water cooler dealer

ACRN-11

In the West it's
REFRIGERATION SERVICE INC.
Pacific Coast Supply Jobber
since 1928

Your letterhead will bring our latest
catalog—also our House Organ.

"The Liquid Line"

3109 Beverly Blvd.
LOS ANGELES 4, CALIF.

AVAILABLE

Material Control Manager

Past three years with large refrigeration manufacturer in charge of inventory control, stores, receiving and expediting. Previously purchasing agent for leading electrical device manufacturer. Can start at once. Free to travel. Age 38 and married.

Address Box 1852, Air Conditioning & Refrigeration News

PATENTS

Weeks of Oct. 2 & 9

2,385,523. CONDITION CONTROLLER. Homer E. Malone, Milwaukee, Wis., assignor to Perfex Corp., Milwaukee, Wis., a corporation of Wisconsin. Application June 20, 1941, Serial No. 339,977. 17 Claims. (Cl. 200-140.)

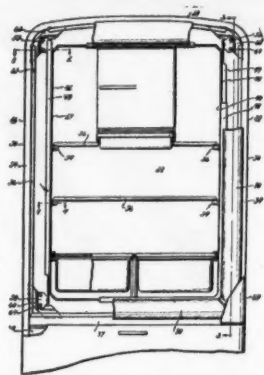


1. In a controller for an air conditioner which is adapted to heat a space during the heating season and to improve conditions therein at other times, the combination of a control device having a first position adapted to place the conditioner into operation and a second position adapted to place the conditioner out of operation, a thermostatic element for moving said control device to its first position upon fall in temperature to a predetermined value and for moving said control device to its second position upon rise in temperature above said value, control point adjusting means for determining the temperature at which the control device is actuated by the thermostatic element, said control point adjusting means being capable of varying the control point from values suitable for the heating season to a value higher than the temperatures normally occurring at other times for causing the control device to assume its first position substantially irrespective of temperature, stop means associated with said adjusting means for preventing accidental adjustment of the control point above a value which is suitable for the heating season, and release means for said stop means for permitting adjustment of the control point to a higher value.

2,385,908. REFRIGERATING APPARATUS. George M. Armstrong, Grand Rapids, Mich., assignor to Nasa-Kelvinator Corp., Detroit, Mich., a corporation of Maryland. Application July 13, 1941, Serial No. 402,904. 1 Claim. (Cl. 220-15.)

In a refrigerator cabinet having inner and outer casings in spaced relation with heat insulation therebetween, an opening formed in the front wall of said outer

casing, an opening formed in the front wall of said inner casing, the front walls of said inner and outer casing being arranged in planar alignment terminating in

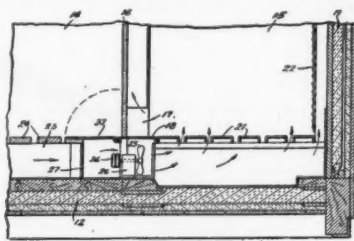


spaced relation to each other, the front wall of said inner casing having its edges bent rearwardly to form a U with a side wall of said inner casing, vertically extending rails adjacent each of the side walls of said inner casing and at the front thereof with each rail having its forward portion bent to extend diagonally across said U to form a wedge for maintaining said rail against the side of said inner casing, means attaching said rails to said side walls of said inner casing, gasket members secured across each corner in the opening of the front wall of said outer casing, outwardly projecting legs provided at opposite ends of said rails for attaching to a respective gasket, and a relatively thin breaker strip for joining the front walls of said inner and outer casing.

2,386,002. AIR CIRCULATING MEANS FOR REFRIGERATOR CARS. Arthur F. O'Connor, Chicago, Ill., assignor to Union Asbestos & Rubber Co., a corporation of Illinois. Application Dec. 13, 1945, Serial No. 514,025. 10 Claims. (Cl. 62-24.)

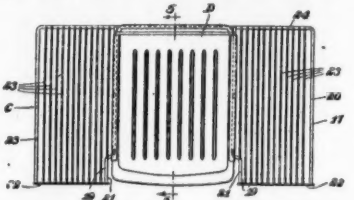
1. In a refrigerator car having a bulkhead dividing the car into a lading compartment and an ice compartment, air circulating means comprising a beam extending transversely across the car adjacent the bulkhead and spaced above the floor of the car, a series of fans mounted between the beam and the floor of the car to circulate air through the lading

and ice compartments, movable vane means adjacent the fans normally held in a position to open the space between the fans and movable to a position to close the space between the fans, and



means operable when the fans are in operation to move the vane means to the last named position.

2,386,150. REFRIGERATOR AND TRAY CONSTRUCTION. Enoch Swedman, St. Paul, Minn., assignor to Seeger Refrigerator Co., St. Paul, Minn., a corporation of Minnesota. Application March 14, 1942, Serial No. 434,658. 4 Claims. (Cl. 312-150.)



3. The combination with a slidable tray and a pair of tray supporting spaced tracks at the sides thereof, of an outwardly projecting flange on each tray side, one of the flanges having shoulder means therein intermediate the ends thereof, the spaced tracks each comprising a rod upon which said tray flanges may slide, an angular guide secured to one vertical side of said rod, said angular guide including a flange extending horizontally in spaced relation to the upper surface of said rod, and an inwardly turned ear on said angular member above the level of the upper surface of said rod engageable with said shoulder means upon slidable movement of the tray in one direction.

(Continued on next page, Col. 2)

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$2.50 per insertion. Limit 50 words.
RATES for all other classifications \$5.00 per insertion. Limit 50 words.
Advertisements set in usual classified style. Box addresses count as five words, other addresses by actual word count.
PAYMENT in advance is required for advertising in this column.

POSITIONS WANTED

SERVICE MANAGER: 15 years experience on low and high pressure equipment. Desires connection with large Texas or nearby concern, such as a distributor or large department store, etc. 34 years old, 3 years college. Address—L. B. PUGH, 4107 Orlando, Dallas 11, Tex., or phone W-0278.

ELECTRIC water coolers. 15 years successful experience rentals, sales, including bottle water business, beginning from straight canvassing to charge sales and general supervision, stationary and marine, which position now holding. Desire change where compensation commensurate results and efforts. New York area, Ebco products preferred, neither essential. Box 1826, Air Conditioning & Refrigeration News.

ATTENTION MANUFACTURERS: Two reliable, industrious refrigerating engineers with years of sales engineering experience desire to represent manufacturers of condensing units, coils, valves, etc. Large acquaintance jobbers, equipment manufacturers, distributors, and designers. Location of headquarters in Saint Louis, Missouri and serve area of 400 mile radius. Box 1830, Air Conditioning & Refrigeration News.

REFRIGERATOR SHOP Mechanic. Experience on Frigidaire open and sealed units, General Electric open and sealed units, commercial and domestic. Drivers license. Prefers to work for large company or distributor. Also interested in a \$1,000 investment partnership. Box 1845, Air Conditioning & Refrigeration News.

APPLICATION ENGINEER: 12 years experience as service and application engineer with refrigerating, air conditioning and marine refrigeration equipment. Desire position where knowledge and responsibility can be exercised. 30 years of age, married. References. Box 1847, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

COMMERCIAL REFRIGERATION service and installation men wanted by well established refrigeration company in northwestern Illinois. Permanent employment, good working conditions, complete shop equipment, commission on labor, parts, and new equipment sales with a guaranteed minimum salary, trucks furnished. Give complete details first letter. AHRENS REFRIGERATION SALES & SERVICE, Sterling, Ill.

SALESMANAGER for air conditioning and commercial refrigeration department. Must have had a successful background in merchandising and sales engineering. Partnership arrangement to man who can qualify for this outstanding opportunity. ARCTICARE REFRIGERATION CO., 3613-15 Broadway, Kansas City, Mo.

DRAFTSMAN and engineer for heating, ventilation, and air conditioning. KROESCHELL ENGINEERING CO., 215 W. Ontario St., Chicago.

WANTED: MANAGER for commercial refrigeration department. Must be experienced in selling refrigerated cases, fixtures, etc., directly to the users and be able to train salesmen. KUHR BROTHERS, Savannah, Ga.

SAN DIEGO, California. Wright Refrigeration Service requires first class service men at \$1.25 per hour with time and half over 40 hours per week. Steady work, lots of overtime, and the best climate in America. WRIGHT REFRIGERATION SERVICE, 1337 India St., San Diego, Calif.

APPLICATION ENGINEER: familiar with technical and practical applications of heat transfer equipment wanted by refrigeration and air conditioning manufacturer located in Michigan. Please advise background and qualifications. Box 1793, Air Conditioning & Refrigeration News.

COMMERCIAL application and service engineers. Large refrigeration firm with growing export business has openings in several territories for qualified refrigeration application and service engineers. Knowledge of foreign languages helpful. Write giving full details experience and references. Box 1797, Air Conditioning & Refrigeration News.

SERVICE MEN—Chicago—\$1.85 per hour plus \$2.25 per hour car allowance. Steady employment with large, long established refrigeration and air conditioning installation and service organization. Advancement opportunities in expansion program. Consideration given only to thoroughly experienced, competent men. Give full details in your letter. Box 1808, Air Conditioning & Refrigeration News.

SALES MANAGER: commercial fixture, refrigeration, to employ and train salesmen. Also handle branch office and understand Butcher Tool Supplies. Must have proven record. To qualifying party can offer attractive position handling office and Iowa territory well known firm. Give qualifications, age, past employ. Strictly confidential. Box 1815, Air Conditioning & Refrigeration News.

LABORATORY test & project engineers. Openings for several refrigeration laboratory test and project engineers interested in permanent position with well established refrigerator manufacturer. Should have sufficient experience to carry a development or research project to completion. Mechanical or Electrical Engineering graduates preferred. Give education, experience, references. Box 1818, Air Conditioning & Refrigeration News.

AIR CONDITIONING Engineer wanted for New York market; capable designer, cost estimator, high grade application engineer; thoroughly experienced, with record of successful installations, to head up engineering department old established organization. Excellent opportunity. Give experience, references, salary desired, first letter. Opening immediate and permanent. Write fully. Box 1834, Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER. Established Commercial Refrigerator Manufacturing Company, Middle West, good post war business. Able to calculate refrigeration loads, coil and compressor capacities, refrigerator designs, have some refrigeration service experience in field. State education, experience, age, marital status, references, previous employment if any starting salary expected. Box 1841, Air Conditioning & Refrigeration News.

SALES SUPERVISOR. Preferably with experience selling commercial refrigerators. Must travel. Steady employment by an established Mid-Western manufacturing company. State previous experience, reference, age, and educational background. Box 1842, Air Conditioning & Refrigeration News.

FRANCHISES WANTED

ELECTRIC REFRIGERATOR manufacturers. If you have quality products at the right prices we can help you place them in the New York area, where we will service them. We have served many of the largest department stores and realtors since 1932. FRANK SERVICE CO., 261 East 161st St., Bronx, N. Y.

LEADING COMMERCIAL and industrial refrigeration concern in mid-town of New York City, in their own 5-story building desires connections for distributing refrigerators, showcases, freezers, condensing units, coils, etc. Have own installation, service, and engineering departments. 16 years experience in field. SIMON REFRIGERATION EQUIPMENT CO., 763 First Ave., New York City.

ORGANIZATION with 14 years distribution experience in air conditioning and allied products wishes to expand its product line. Our present market is offices, apartments, and commercial establishments in Metropolitan New York. Should you desire to merchandise in this area we would welcome your communication. Box 1846, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

WE NEED Condensing units, both air-cooled and water-cooled. 1/4 hp. and up. Standard makes preferred. Wire, write, or phone GENERAL REFRIGERATOR CORP., 678 Broadway, New York 12, N. Y. STuyvesant 9-1222.

EQUIPMENT FOR SALE

"CENTRAZ" VAPOR-SEAL. A water-proof adhesive that adheres to metal, wood, cement, plaster, etc. For lining frozen food and ice cream cabinets, milk and water coolers, walk-in boxes and refrigeration applications requiring vapor control. Wall applications can be painted. CHRISTY CO., 1530 Olive St., St. Louis 3, Mo.

FOR SALE: Dew Freeze frozen food cabinets, all white enamel. Streamlined. 20 cu. ft. Complete \$377. Less unit \$200. Immediate delivery. DEW FREEZE CO., 2651 Washington, St. Louis, Mo., Jef. 018.

FOR SALE: Remanufactured air-cooled water-cooled condensing units 1/4 hp. to 1 1/2 hp. Frosted food and ice cream cabinets. EDISON COOLING CORP., 14 East 149th St., New York 51, N. Y.

FOR SALE: Large stock of surplus used commercial Refrigeration Equipment consisting of condensing units-assembled and disassembled-bodies, condensers, coils, controls, water valves, expansion valves, shut-off valves, etc. Reasonable. EVERLAST REFRIGERATION CORP., 40 Fourth Ave. at 30th St., New York City.

BEVERAGE COOLERS: 6 ft., capacity 22 cases; 8 ft., capacity 30 cases. These are dry coolers with heavy duty coils and one forced-air fan in 6 ft. model, two in 8 ft. model. Both have stainless steel doors and trim. Immediate delivery. GENERAL REFRIGERATORS CORP., 678 Broadway, New York 12, Stuyvesant 9-1222.

FREEZERS: Complete in every respect ranging in capacity from 8 to 25 cu. ft. Excellently constructed, nicely finished, with stainless steel tops and stainless steel doors. Large supply blower coils and freezer plates, all sizes. All equipment available for immediate delivery. Wire, write, phone GENERAL REFRIGERATORS CORP., 678 Broadway, New York 12, Stuyvesant 9-1222.

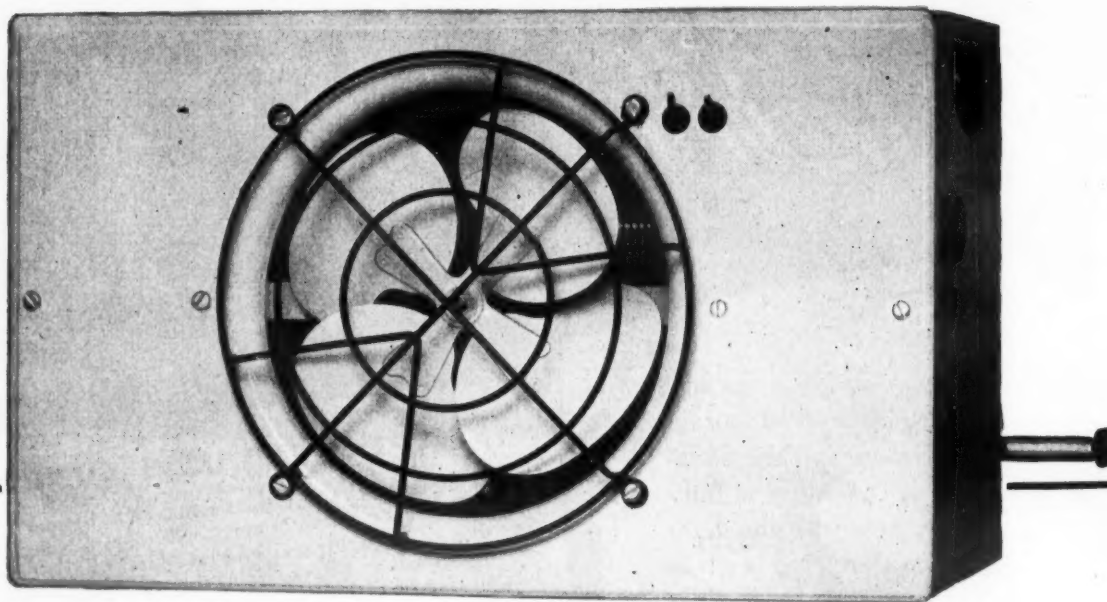
FOR SALE: 2 Row Heating Coils to fit into all Standard Model 3 and 5 ton units. Shipment in five days. ICE AIR CONDITIONING CO., INC., 252 West 26th St., New York 1, N. Y.

QUALITY dry beverage coolers. 75 inches long, 23 inches deep, 39 inches high, sliding doors. Freezers, stainless steel front sides and top. Beer pumps, blowers. Stainless steel beer coolers, tavern water coolers. MAJESTIC REFRIGERATOR CORP., 625 Broadway, New York 12, N. Y.

FIFTEEN YORK Super-Freezer door Roller Seal Type, 6 inch corkboard insulation, galvanized hardware. Door-back entirely metal clad, front and edges metal clad 4 ft. high. Size 4'0" wide, 6'0" high, eight right hand and eight left hand. Write or wire collect: VOLUNTARY INSULATION CO., INC., 2210 Ellington Place, Nashville, Tenn.

HOME, FARM freezers. New. Limited supply available. All steel construction finished in white Duco and stainless steel tops for use in Quick-Freeze and Storage. WILSON INDUSTRIES, 2533 Holladay Ave., New York City 67. OL 5-6905.

New! FILTERPURE Ceiling Reach-in Units



-with These 4 Important Features:

1. COMPLETE AIR PURIFICATION

The patented and exclusive Filterpure method allows the storage of all types and kinds of food without contamination or odor.

2. HIGH HUMIDITY

Ample coil surface combined with correct air volume results in a humidity in excess of 90%.

3. CONTROLLED AIR MOVEMENT

Positive air circulation provides a temperature difference from top to bottom of only 1°.

4. NO SHELF CUTOUT

The unit is so compact that it is installed above the first shelf.

Let us send you complete information about our new line of cooling units.

For Information,
Call or Write-

BETZ CORPORATION
HAMMOND, INDIANA

SEND for CATALOG

SORENG

ELECTRICAL PRODUCTS
for
REFRIGERATORS-APPLIANCES

SORENG MANUFACTURING CORPORATION

1907 Clybourn Ave.-Chicago 14, Ill.

LINES WANTED

Manufacturers Representative covering Ill., Ind., and Wis. desires line of Domestic refrigeration, Home-freeze or good refrigeration specialty line. Well financed, best of references. More than 15 years actual experience selling to electrical trade.

Box 1848, Air Conditioning & Refrigeration News

GENUINE
MAYFLOWER

CONDENSING UNITS AND PARTS

Jobber Inquiries Invited

A complete line backed by nearly a quarter century of user confidence. Write for prices.

MAYFLOWER PRODUCTS, INC.
13 S. 5th St., Richmond, Ind.

EXPORT TO EUROPE

Refrigeration sales supervisor many years in industry with outstanding sales record seeks connection with large manufacturer for representation abroad. Familiar with European market.

Box 1832, Air Conditioning & Refrigeration News

PURO ELECTRIC WATER COOLERS

BRANCHES IN PRINCIPAL CITIES
MAIN OFFICE
440 LAFAYETTE ST.
New York 3, N. Y.

PURO FILTER CORP. OF AMERICA

DRINKING WATER
SPECIALISTS FOR 40 YEARS.

LARGE REFRIGERATION CO.

Has openings for experienced refrigeration salesmen to work abroad. Knowledge of foreign languages helpful. Excellent money making possibilities. Write giving full details experience and references.

Box 1794 Air Conditioning & Refrigeration News

FOOD MUST BE CONSERVED

Refrigeration today is performing a vital service by guarding and preserving for future use, priceless food which might otherwise be wasted. Write for literature.

GENERAL REFRIGERATION DIVISION

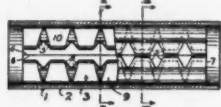
Lipman

Automatic Refrigeration

Patents (Con't)

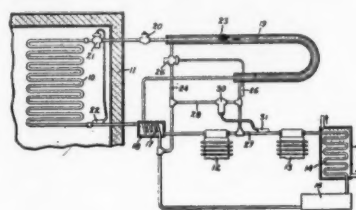
(Continued from preceding page)

2,386,159. **HEAT EXCHANGER FIN TUBE.** Frederick T. Elder, Mountain Lakes, N. J., assignor to American Locomotive Co., New York, N. Y., a corporation of New York. Application Feb. 17, 1944, Serial No. 522,702. 2 Claims. (Cl. 138-38.)



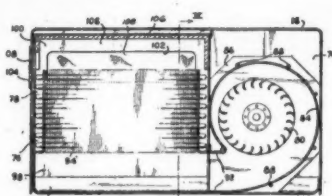
1. A heat exchanger fin-tube comprising a tubular member; and a hollow sheet metal structure within said member having circumferentially alternate base portions and inwardly projecting V-shaped portions extending longitudinally of said member, said base portions engaging and being bonded to the inner face of said member and each of said V-shaped portions having a longitudinal row of spaced orifices, each of said orifices extending from one of the adjacent base portions through the apex of its V-shaped portion to the other adjacent base portion, said orifices providing of each of said V-shaped portions a longitudinal row of V-shaped double-walled fins.

2,386,198. **MULTISTAGE REFRIGERATING SYSTEM.** Wayne E. Dodson, Caldwell, N. J., assignor to General Electric Co., a corporation of New York. Application Feb. 8, 1944, Serial No. 521,520. 2 Claims. (Cl. 62-115.)



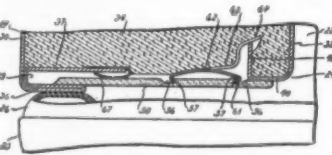
1. A multi-stage refrigerating system comprising high and low pressure compressors, an evaporator and a condenser, an interstage connection for conveying refrigerant from the outlet of said low pressure compressor to the inlet of said high pressure compressor, a liquid line for conducting liquid refrigerant from said condenser to said evaporator, a heat exchanger for subcooling the liquid in a portion of said line, means providing two parallel paths for bleeding refrigerant from said liquid line to said interstage connection, one of said paths being arranged to supply refrigerant to said heat exchanger and the other of said paths communicating directly with said interstage connection, means for controlling the flow of refrigerant through said first path in accordance with a condition of said subcooler, and means responsive to the temperature of the refrigerant at the inlet of said high pressure compressor for controlling the flow of refrigerant through said second path.

2,386,303. **AIR CONDITIONING APPARATUS.** Arthur H. Eberhart, Springfield, Mass., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa., a corporation of Pennsylvania. Application Feb. 21, 1944, Serial No. 523,241. 3 Claims. (Cl. 257-39.)



3. In an air conditioning unit including an inner portion adapted to project into the room the air of which is to be conditioned and an outer portion adapted to project into the atmosphere, means dividing said outer portion into a fan chamber and a condenser chamber, a condenser disposed in said condenser chamber in spaced relation to the top and bottom thereof whereby a first air-receiving space is formed above, and a second air-receiving space is formed below, said condenser, a fan disposed in said fan chamber with the outlet of said fan discharging air in a horizontal direction directly into one of said spaces, there being an opening in a vertical wall of said condenser chamber for discharging air in a horizontal direction from the other of said spaces to the atmosphere, and a lining of sound-deadening material for a wall of said other space.

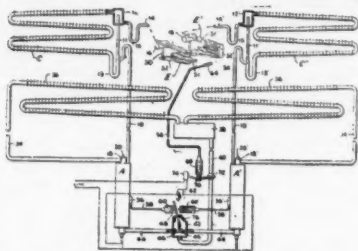
2,386,387. **REFRIGERATING APPARATUS.** Earl D. Drake, Grand Rapids, Mich., assignor to Wash-Kelvinator Corp., Detroit, Mich., a corporation of Maryland. Application Feb. 28, 1944, Serial No. 432,732. 1 Claim. (Cl. 220-9.)



A cabinet construction, comprising inner and outer shells having the edge portions thereof bent inwardly toward each other, the edge portion of the outer shell being bent to form a pocket opening toward the edge portion of the inner shell, an inwardly flange extending rearwardly from said edge portion of the inner shell, a breaker strip bridging the space between said edge portions of the inner and outer shells, and having grooves formed on the inner surface thereof, a bowed resilient member provided with fingers engaging said grooves for attaching said member to said breaker strip, an outwardly extending arm on said resilient member, said breaker strip having, in operative position, an edge thereof inserted in said pocket and said arm of said resilient member engaging over said inward flange and subjecting said arm to tension

for maintaining said resilient member in a bowed condition to cause the fingers thereof to grip said breaker strip and to urge said breaker strip into engagement with said edge portion of said inner shell.

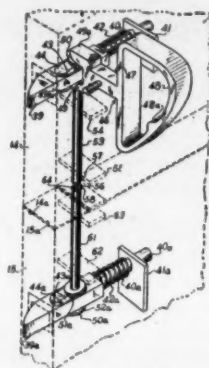
2,386,438. **REFRIGERATION.** Curtis C. Coons, North Canton, Ohio, assignor to The Hoover Co., North Canton, Ohio, a corporation of Ohio. Application Feb. 25, 1944, Serial No. 432,307. 20 Claims. (Cl. 62-5.)



1. A refrigerating apparatus comprising a generator-absorber charged with a refrigerant and an absorbent therefor, means for heating said generator-absorber to evolve refrigerant vapor from the absorbent, means for liquefying at least a portion of said refrigerant vapor and means for passing refrigerant vapor directly from said generator-absorber into said liquid refrigerant for raising the liquid refrigerant from said liquefying means to a higher level.

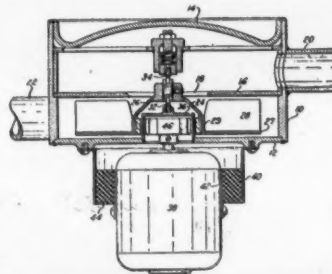
2,386,495. **REFRIGERATOR DOOR STRUCTURE AND LATCHING MECHANISM.** Temple M. Rietz, Racine, Wis. Application March 18, 1944, Serial No. 527,029. 15 Claims. (Cl. 292-33.)

1. In a refrigerator which includes a housing defining an internal refrigerating space provided with an open doorway, a sectionalized door comprising relatively movable upper and lower parts hinged to said housing to close and open different parts of said doorway, latching means individual to said door parts for respectively latching said door parts closed, a latch actuator carried by one of said door parts and movable in either of two directions away from a normal position, means responsive to operation of said actuator in either of said two directions for unlatching the latching means individual to the upper door part, and means responsive to operation of said actuator in



a predetermined one of said two directions for unlatching the latching means individual to the lower door part.

2,386,505. **REFRIGERATION.** Clarence G. Puchy, Cleveland, Ohio, assignor to The Hoover Co., North Canton, Ohio, a corporation of Ohio. Application July 9, 1942, Serial No. 450,298. 15 Claims. (Cl. 230-117.)



1. A hermetically sealed circulator unit comprising, a casing, a magnetic follower mounted for rotation in said casing and including an annulus of magnetic material, a fan secured to the outer periphery of said annulus, an inverted cup-shaped member of non-magnetic material hermetically sealed to said casing and extending upwardly therein into the interior of and closely adjacent said magnetic annulus and a magnetic driver mounted exteriorly of said casing and extending into and closely adjacent the interior of said inverted cup-shaped member.

(To Be Continued)

TRUCK

Immediate Delivery
Rubber Tired Wheels

NOW! "Hande Andy" all purpose tube steel 600 lb. cap. Full size, first quality, not a wartime makeshift.

Light wt. very easy to handle. Ht. 44" .14" wide at nose. Curved cross pieces. The only truck we sell. Specializing permits a better truck, and more of them! By mail only at present time. Fully guaranteed. F.O.B. 1% 10 days. Unrated firms cash with order.

Clip this.

The HANDEES CO., Dept. 2637 Bloomington, Ill.

We Sell Thru

Distributors of refrigeration and insulation. Get particulars on our NEW

Master Food Conservator

the Modern way to Conserve food

Master Manufacturing Corp.
121 Main St. Sioux City 4, Iowa

700,000 Master Food Conservators In Use

Automatic Pressure, Temperature and Flow Controls

GENERAL CONTROLS

801 ALLEN AVENUE, GLENDALE 1, CALIF.
BRANCHES: BOSTON • NEW YORK • PHILADELPHIA • CLEVELAND
DETROIT • CHICAGO • DALLAS • DENVER • SAN FRANCISCO

You waste less tube
with Anaconda CUP-SEAL*

In buying copper refrigeration tubing you naturally want the clean, bright, dry interior protected by sealed ends. But don't you also want to avoid unnecessary waste of copper? Then use Anaconda CUP-SEALED Tubes.

As the above photograph demonstrates, with Anaconda CUP-SEAL the end cut off need be no longer than the diameter of the tube. Furthermore, the cup-sealed end has 10 sharp edges to dent or mar the coil, and it permits feeding the tube through smaller openings than is possible with crimped or flattened ends.

Anaconda Refrigeration Tubes are 99.9% pure copper, deoxidized to increase corrosion resistance, thoroughly and uniformly annealed throughout their entire length. They are easy to bend, and readily flared without cracking. Made in accordance with A.S.T.M. Specification

B68, in standard sizes up to and including 3/4" O.D., and stocked by distributors in coils of 25, 50 and 100 feet. Longer lengths available on special order.

*Patent Applied For

AMERICAN VIBRATION ELIMINATORS



American Vibration Eliminators exclude vibration and compensate for thermal expansion in pipe systems. Pressure-tight, safe for conveying costly gases or liquids, such as refrigerants, American Vibration Eliminators are easily installed. For catalog, write American Metal Hose Branch, Waterbury 28, Connecticut.

Buy VICTORY BONDS... help assure World Peace



Anaconda Refrigeration Tubes

FRENCH SMALL TUBE BRANCH OF THE AMERICAN BRASS COMPANY
Subsidiary of Anaconda Copper Mining Company—General Offices: Waterbury 88, Connecticut
In Canada: ANACONDA AMERICAN BRASS LTD., New Toronto, Ont.

Heads Baker Sales



STERLING F. SMITH

Formerly with Mills Industries and WPB, he has been appointed general sales manager for Baker Ice Machine.

Hotpoint's National Prices on Ranges 'Same as 1942'

CHICAGO—In keeping with its newly established national pricing policy, Edison General Electric Appliance Co. has issued the country-wide retail prices for Hotpoint ranges on what is called a "same as 1942" basis.

Hotpoint's "completely deluxe" Masterpiece RC 8, equipped with timer oven control clock and seven-quart "thrill" cooker, will be \$244.50 to consumers. The middle-priced Hostess RB-17, with automatic timer control, will sell for \$177.75, and the lowest-priced Century RB-15, will cost \$116.95.

Approved recently by OPA, the price schedule, which includes transportation and federal tax, was made public by Gregory L. Rees, manager of the Concern's range sales division. Prices to distributors are still in the process of formulation, Mr. Rees said, and will be arrived at under guidance of a policy "aimed at complete price protection for the consumer with a minimum of 'absorption' by dealers and distributors."

Mr. Rees explained that under Hotpoint's national pricing program, transportation and other costs were "averaged" and put into the final "delivered national price." The company's appliances formerly were sold at "suggested retail prices," f.o.b. Chicago, he said.

Dealers and distributors are calling this new policy "an advance in appliance merchandising," the Hotpoint spokesman reported. He predicted increased effectiveness for manufacturers' national advertising when stores can advertise "price-known merchandise."

Revelation of prices will result in more consumer interest in major appliances, with top-quality products gaining most favor, it was foreseen by Mr. Rees. Big advantage of national pricing is that "it tells people they can afford the best, with quality appliances costing less than commonly thought," was his opinion.

REFRIGERATION ACCESSORIES

- Instantaneous Water and Beverage Coolers.
- Oil Separators.
- Two-Temperature Valves.
- Accumulator Heat Exchangers.
- Equalizer Tanks.
- Controlled Temperature Photographic Processing Units.
- X-Ray Refrigerating Units.

TEMPRITE PRODUCTS CORPORATION

47 PIQUETTE AVENUE DETROIT 2, MICHIGAN

"RECOLD" WATER DEFROST



REFRIGERATION ENGINEERING Inc. LOS ANGELES - CALIFORNIA

Kelvinator of Canada Plans Expansion

LONDON, Ontario, Canada—In line with plans to increase its manufacturing facilities, Kelvinator of Canada, Ltd., announced that an immediate expenditure of about \$175,000 will provide for an extension now being added to the main plant, thus increasing present floor space by about 30%.

This additional space will house press equipment enabling the company to build a large number of parts formerly imported.

Modern seam welding equipment also will be installed in another building for the manufacture of evaporators, previously imported.

Wootton Heads District For Seeger-Sunbeam

ATLANTA—A. Gordon Wootton, former chief of refrigeration and air conditioning section, Special Equipment Branch, General Industrial Equipment Division, WPB, has returned to the Seeger-Sunbeam Corp., manufacturer of commercial refrigeration, as manager of the south-eastern territory, with headquarters here.

Mr. Wootton has been with Seeger since 1928, when he was employed by the New York office. In July, 1942, he left the company to go with WPB.

The territory covered by Mr. Wootton includes 12 states, extending from Virginia to Louisiana.

MEETINGS FOR THE INDUSTRY

Nov. 7-9, Wed-Fri: Fall REMA meeting, members only. The Homestead, Hot Springs, Va.

Nov. 13-16, Tues-Fri: 28th annual meeting of the National Association of Ice Industries. The Sherman, Chicago.

Nov. 15-16, Thurs-Fri: First postwar models on display at Youngstown Kitchen distributors' meeting at the headquarters plant, Warren, Ohio.

Dec. 10-12, Mon-Wed: 41st annual meeting of ASRE. Four technical sessions, others. The Pennsylvania, New York City.

Jan. 7-19: Winter market sessions at the American Furniture Mart and the Merchandise Mart, Chicago. Forums on available merchandise, new products, postwar distribution plans.

Jan. 28-30, Mon-Wed: 52nd annual meeting of ASHVE. The Commodore, New York City.

March 4-7, Mon-Thurs: Spring REMA meeting, including joint sessions with NRSJA. The Stevens, Chicago.



Bush WALL MOUNTED PANEL COOLERS

The compact design of Bush Wall Mounted Coolers gives balance between amount of surface and air speed . . . assures excellent humidity control and high efficiency in operation. Ideal for market coolers with low ceilings where space is small and high capacity refrigeration is needed.

Construction especially sturdy to stand hard usage. Casing of corrosion resistant galvaneal steel, attractively finished in sanitary, white baked enamel. Available in various capacities and sizes to meet all conditions. Heat Exchangers specially engineered for each size.

BUSH

Heat Transfer Products by

HARTFORD, CONNECTICUT

415 LEXINGTON AVENUE, NEW YORK * 549 W. WASHINGTON BOULEVARD, CHICAGO

EXPORT ADDRESS: 13 EAST 40TH STREET NEW YORK * CABLE "ARIAR"